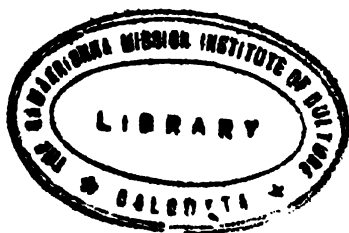


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METHODS OF ANALYSIS.

THE SYMPOSIA READ AT THE JOINT SESSION OF
THE ARISTOTELIAN SOCIETY AND THE MIND
ASSOCIATION AT TRINITY COLLEGE, CAMBRIDGE,
JULY 2ND—5TH, 1926.



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I.—SYMPOSIUM: UNIVERSALS AND THE “METHOD OF ANALYSIS.”

By H. W. B. JOSEPH, F. P. RAMSEY AND R. B. BRAITHWAITE.

I. *By* H. W. B. JOSEPH.

AN article, by Mr. F. P. Ramsey, in *Mind* for last October, discusses the question whether there are universals as well as particulars, and so far as I can understand arrives at a negative conclusion. I say “so far as I can understand,” because it seems to be thought that the only genuine objects are those which are constituents of atomic propositions, and that what the word “Socrates” stands for, or stood for to his contemporaries who knew him, was not a genuine object but a logical construction. Of the forms of these atomic propositions we know nothing, except apparently that the distinction of subject and predicate is applicable within them. The very existence of atomic propositions is alleged not because we can produce an instance of one, but because other propositions presuppose their existence (*Mind*, N.S. xxxiv, p. 409). We know this, it seems, though we do not know the analysis into such atomic propositions of a proposition which is not atomic, like “Socrates is wise” (*ib.*, p. 412). But allowing that they exist, and that the atomic fact, which I take to be the same as the atomic proposition, though the use of the word “fact” by the writers of this school greatly puzzles me, is complex, we have to confess that we cannot tell

whether the two terms in this complex, which I suppose would be the ultimate simples, may not be of the same type. If they are not, perhaps it would be contended that there must be an ultimate distinction of simples after all ; and yet I do not understand that this should be identified with the distinction hitherto often alleged to exist between particulars and universals. I think Mr. Ramsey means to throw that over altogether. Strictly speaking, I think, we are to say that there is nothing except those ultimate simples, at which we do not know how to arrive by analysis. But if we are to use either term for the complex with which we are acquainted, apparently we should call them particulars : this seems to be implied by speaking of " that great muddle the theory of universals " (*ib.*, p. 417).

Mr. Russell, whose admission of a distinction among objects between universals and particulars the article criticizes, understands by particulars what " enter into complexes only as the subjects of predicates or the terms of relations, and if they belong to the world of which we have experience, exist in time, and cannot occupy more than one place at one time in the space to which they belong." Universals, on the other hand, " which can occur as predicates"—if this is an " ultimate simple relation"—" or relations in complexes, do not exist in time, and have no relation to one place which they may not simultaneously have to another " (*Proc. Arist. Soc.*, N.S. xii, pp. 23-24). But it is the distinction between subjects and predicates, rather than that between terms and relations, on which he lays stress. For relations are not constituents of the complexes, or propositions, whose terms they connect (*Principia Mathematica*, ed. 2, p. 43) ; but predicates, being terms connected with their subjects by the unique relation (if there is such a relation) called predication, are constituents. An ultimate distinction between subjects and predicates would therefore be one between two kinds of constituents in the universe, having respectively the characteristics named

above, and there would be both particulars and universals. That it is predicates rather than relations which resist the abolition of the difference between particulars and universals seems implied in the following passage from Mr. Russell's paper (*Proc. Arist. Soc.*, N.S. xii, p. 6). "A particular is naturally conceived as a *this*, or something intrinsically analogous to a *this*; and such an entity seems incapable of being a predicate or a relation. A universal, on this view, will be anything that is a predicate or relation. But if there is no specific relation of predication, so that there is no class of entities which can properly be called predicates, then the above method of distinguishing particulars and universals fails." This would imply that they cannot be distinguished merely as terms from relations, though there is no proposal to abolish that distinction. Whether the reason why terms and relations cannot be regarded as respectively particulars and universals be that (in Mr. Russell's opinion) there are no instances of relations, but the relation, for example, of similarity is numerically the same between all similars, or at least all members of any one set of similars, I do not know.

Mr. Ramsey, therefore, in setting out to demolish the distinction between particulars and universals, attempts to show that there is no ultimate distinction between subjects and predicates. In his discussion no difference seems to be recognized between the relation of substance and attribute, as when I say that Socrates is wise, that of species and genus, as when I say that unpunctuality is a fault, and what I have been taught is the relation of subject and predicate. In the sense that I should give to this last I agree with Mr. Ramsey that the distinction of subject and predicate depends on "the point of view from which we approach the fact." For unless the subject word is a mere demonstrative like the word 'this,' I should say that it signifies something of the nature of that object of thought whose nature the predicate-term determines further; and from

what in its nature our consideration starts depends on conditions which have nothing to do with the relation between these distinguishable elements in its nature. Such language, however, implies a real distinction between the unity of the thing or object of thought and its distinguishable characters, and cannot be allowed by the method of analysis, for which a thing is the class of its appearances, and the only unity is that of point-event-particles, such as are integrated into the sense-data from which our acquaintance with the universe starts. I cannot therefore expect Mr. Ramsey to allow my interpretation of the doctrine that the distinction of subject and predicate depends on "the point of view from which we approach the fact." But I do confess to finding a difficulty in his own justification of it. "If," he says, "the centre of our interest is Socrates, we say 'Socrates is wise,' if we are discussing wisdom we may say 'wisdom is a characteristic of Socrates'; but whichever we say, we mean the same thing. Now of one of these sentences 'Socrates' is the subject, of the other 'wisdom'; and so which of the two is subject, which predicate, depends upon what particular sentence we use to express our proposition, and has nothing to do with the logical nature of Socrates or wisdom, but is a matter entirely for grammarians." (*Mind*, *loc. cit.*, p. 404.) Against this, I should say, firstly, that by his own showing it is not a matter for grammarians; the point of view from which we approach a fact is quite another matter from the choice we make of language for a statement about it. Secondly, when I say "wisdom is a characteristic of Socrates," though wisdom may be the subject of my judgment, the predicate is not "Socrates," but "characteristic of Socrates." And, if we pass from the relation of subject and predicate to that of substance and attribute, which (as I have said) he does not distinguish from the former, we cannot think that Socrates characterizes wisdom, as wisdom may characterize Socrates.

But the retort to this objection would doubtless be something like the following :—The distinction of substance and attribute is antiquated and untenable. The only substances are simples, and Socrates is a complex. If wisdom is a simple, it is a substance, and has as good a right to be a subject as Socrates. Both the statements considered assert the same relation between wisdom and Socrates, and it no more matters where we start in our statement than whether we say that Caesar is like Pompey or Pompey like Caesar. And this will appear more clearly if we examine the considerations that seem to have led to the mistake of thinking that Socrates and wisdom are not, or cannot be analyzed into, entities of the same logical type, and so of erecting the baseless distinction between particulars and universals.

Briefly, the source of the mistake is this. A term like "wise," as an element in a proposition, serves to collect together two ranges of propositions into which it enters. One consists of all propositions in which (in ordinary language) "wise" is predicated of some particular subject; and if we represent any and each of these subjects by x , we get the form " x is wise." The other consists of all propositions in which "wise" occurs, whether or not as predicated of x , as "neither Socrates nor Plato is wise," etc., which may be symbolised as " $? \text{ wise},$ " where ϕ is variable, as x was before. But a term like "Socrates" serves to collect only one range of propositions, viz., such as "Socrates is wise," "Socrates is just," "Socrates is neither wise nor just," which may be symbolised as "Socrates is q ." We have not here one collection of all propositions in which "Socrates" occurs, corresponding to that of all in which "wise" occurs, and a narrower, in which it occurs as subject, corresponding to the narrower in which "wise" occurs as predicate. Hence we think Socrates must be always subject. "This is obviously the explanation of the difference we feel between Socrates and wise" (*Mind.*, *loc. cit.*, pp. 409-411).

I hope I have stated the argument fairly, for I do not find it conclusive. I do not see why propositions in which "Socrates" occurs otherwise than as subject should not be treated as values of " ϕ Socrates": indeed Mr. Ramsey points out that they may. What he seems really to be thinking of, when he speaks of the wider range of propositions collected under the symbol " ϕ wise," is not all in which "wise" occurs, such for example as "wisdom is scarce," or "no one remembered that poor wise man," but only such as "Socrates is neither wise nor just"; and " ϕ Socrates" similarly suggests not "the Athenians put Socrates to death," or "the doctrines of Socrates and of Plato are hard to separate," but only such as "neither Socrates nor Plato is wise." For it is pointed out that "neither wise nor just" is a compound adjective (though this may be questioned), whereas "neither Socrates nor Plato" is not a compound substantive. It would seem then rather that men must have thought they detected something in the respective natures of such objects of thought as words like "Socrates" and "wise" respectively indicate to justify them in saying that Socrates cannot be predicated in the same way in which wisdom can; and I doubt if the view was ever suggested to any one's mind by a difference in the ways in which propositions wherein the words occur lend themselves to functional symbolization.

Mr. Ramsey, however, thinks that the groundlessness of any ultimate distinction between substantives and adjectives (*i.e.*, substantival and adjectival objects) can be seen when we realize that Socrates is not a genuine object, but a logical construction of objects (*ib.*, p. 412). Genuine objects are such as enter into atomic facts (though, as we have seen, atomic facts cannot be found). Instances of wisdom may enter into such facts—*i.e.*, particular wisdoms or "wises." It is commonly thought there are no instances of Socrates. But Prof. Whitehead has rightly suggested that material objects are "adjectives of the events in

which they are situated." And the proper statement of "Socrates is wise" would be "for all events E, Socrates is situated in E implies wisdom is situated in E." Socrates is one class of particulars, wisdom is another; the atomic fact combines a member from the first class with a member from the second; there the distinction of subject and predicate corresponds to no ultimate distinction between two kinds of object. That we collect under the symbol "wise" particulars related to each other much otherwise than those are related which we collect under the symbol "Socrates" depends "on human interests and needs," and the difference between the symbols is "of a subjective character."

Such, if I follow, is the argument offered to sweep away "that great muddle the theory of universals." It involves believing so much which I disbelieve wholly, that, if I set about to enumerate the points of my dissent, this symposium would "find no end, in wandering mazes lost." I might ask, if Socrates is a logical construction, who or what does the constructing, and whether the human interests and needs spoken of, are the interests and needs of other similar logical constructions, or of elements entering into them. But I would rather call attention to what seems to me the fundamental assumption of the whole school, viz. that what is genuinely one is in no sense also many: that the universe is an aggregate of simples in various relations: and that it is the business of logic to find out and express in formulae the fundamental principles on which these simples are built up into aggregates. The logical calculus is therefore a calculus of relations between terms whose special natures (if they have any) are ignored as irrelevant. They are just particular items: in their aggregates they are connected by relations of various sorts, dyadic or polyadic, and statements assigning various characters, apparently single, to aggregates or complexes also treated as unities can always be analysed into statements about ultimate simples and the modes of their relation.

All this I steadfastly disbelieve. It seems to me an attempt to extend from the subjects of mathematical thought to those of all thought certain doctrines which only bad reasoning has commended to mathematicians. In this great seat of mathematical learning I feel half ashamed to avow how far my dissent carries me. There is among the subjects of mathematical study one which, under the name of the continuum, used to be thought incapable of being analysed into simples. We are now told that this can be done; that we may start with the simples that compose integers, and out of these build up, by successive processes of aggregation, complexes of complex parts that have the character of continuity. I have wrestled with the explanations given of this construction, and have thought I followed them, and thought I saw that they only succeeded by surreptitiously introducing whole what was to be constructed. But I will not argue this; that might seem presumptuous; anyhow, it will be agreed that success here is vital to the method of analysis. I am concerned now with another form of one in many than the continuous. I allege that this school has been no more successful than nominalists of old in getting rid of universals.

I do not think the issue is rightly conceived in the papers from which I have quoted. Both writers apparently assume that, if the distinction of particulars and universals is maintained, particulars will be always subjects, and predicates always universals. As I understand the issue, no universal is ever predicated of a particular (I would rather have said, of an individual). If Socrates was wise, it was because an instance of wisdom dwelt in him, just as when he died, not the death of which all deaths are instances but one instance of it excited the admiration of his companions. The distinction of particular and universal is not that of substance and attribute. Mr. Ramsey, following Mr. Russell, describes "the two obvious methods of abolishing the distinction" between particulars and universals as those of

"holding either that universals are collections of particulars or that particulars are collections of their qualities." (*Mind*, *loc. cit.*, p. 27.) This identification of universal and quality I venture to think a mere mistake, arising from the fact that language has not distinct names for a particular quality and the universal of which it is an instance. The reason for this is, that the particular quality (and the same is true for relations) cannot be denoted except by reference to some individual that is not a quality or relation and is denoted by a proper name or designation. Yet we may be warned of the mistake too by language. The names of qualities and relations are used in the plural : and though, when I speak of colours and virtues, I may refer to species of colour or virtue, when I speak of the blues in the windows of Chartres Cathedral, or of equal distances, I refer to instances of the same shade of colour or the same distance. Mr. Russell, indeed, holds that there are no instances of relation, as we have seen (*Principles of Mathematics*, §55); and that it is numerically the same relation that unites the constituents of different complexes. In the same interest he holds that the only relations between magnitudes are greater and less ; equality is not a relation between magnitudes, and equal quantities are quantities with the same magnitude (*Principles of Mathematics*, §§151, 158). In so saying, he seems to me to fall out of the frying-pan into the fire.

For if two quantities can have the same magnitude, what is the relation between them and their magnitude ? I cannot conceive that a quantity and its magnitude are two things in relation. Rather a quantity is that of which its magnitude is a determination : and the determined cannot be analysed into the determinable and the determination as a complex into simples, any more than the genus and the differentia into which we speak of analysing a species are two terms in a relation. I know that Mr. Russell treats the relation of genus to species as one

of class-inclusion, and is not the first to do so. But unless his ultimate simples, the constituents of his atomic facts, if we could find them, would be found wholly unclassifiable, so that no two of them deserved to be called more of the same kind than any other two, he must surely be wrong. And even if it were so with these ultimate simples, it is not so with the sense-data which are the final terms to which, in his view, analysis can actually reach. His theory requires him to hold with Hume that whatever is distinguishable is separable; for if not, there is that which cannot be analysed into simples in relation, and is therefore one, and yet exhibits diversity. But I can distinguish the pitch, timbre and loudness of a musical tone, though they cannot exist separately. If then two quantities have "the same magnitude," that can only mean "instances of the same"; *their* magnitudes are not a simple to which the quantities stand in a many-one relation (for Mr. Russell has said that, if there are universals, that is how their particulars are related to them). The instances of the quantity are themselves instances of the magnitude; there are as truly two instances of the same magnitude as two instances of quantity; and even if the instances of the same magnitude stood to it in a many-one relation, the predicate of each particular equal quantity would still not be a universal, but a particular instance of a universal. I do not indeed think that any light is thrown on the relation of particulars to their universal by the phrase I have quoted. That they are many and it one is allowed by all who admit universals, and even by conceptualists. If more is meant than this, if it is meant that the particulars are related many-one to their universal as they might be to another particular—as prints, *e.g.*, to the plate whence they are printed, and that there is no more to the relation than being many-one, then I think the statement is merely false, as false as to make the universal what Aristotle accused Plato of making it, an eternal sensible.

The magnitudes then of equal quantities seem to me instances of a universal. Let me take another case—cardinal numbers ; that a cardinal number is a class of classes cannot be made out without presupposing that it is something else. What has a cardinal number is no doubt a collection or class ; thus the Apostles, the signs of the zodiac, the months of the year are examples of being a dozen ; and all dozens are the class of dozens. But the Apostles, the Muses, the Graces are also a class of classes. True, they are not a class of all classes similar to a given class, and the class of all dozens is, but it is no more so than is the class of all trios—the Graces, the Fates, the balls over any pawnbroker's shop, etc. What distinguishes this class of all classes similar to a given class from that one, except that each class in this is a trio, and each in that a dozen ? The constituent classes of a class of classes cannot be distinguished by the class of classes whereof they are the members, because their assignment to it depends on their being independently distinguished. I do not know whether mathematicians, who so define cardinal numbers, make any use of their definition, but I suspect that their mathematical work is unaffected by it, since it proceeded so well before Frege and Mr. Russell discovered it. As Plato saw, there are questions about the true nature of the entities about which mathematicians reason that need not be raised within that science. Whether there can be a class of dozens unless they are instances of dozenhood is no more a mathematical question (or I would not presume to express an opinion on it) than whether there can be a class of cows, unless they are instances of cowhood, is a zoological one. One might as well say that a cow is the class of all animals similar to a given animal, as that a cardinal number is the class of all classes similar to a given class. Plato distinguished the numbers of which arithmetic treats or the figures which geometry studies alike from sensible things and from ideas or universals. Whether or not he was right in distinguishing them

from the first, he was clearly right in distinguishing them from the second. Circles are instances of circularity, dozens of dozenhood ; but mathematicians are concerned with circles and dozens, not with circularity and dozenhood, and so may make mistakes in regard to the latter without detriment to their study of the former. I am only pointing out that we could not distinguish the groups the Apostles, the signs of the zodiac, the months on the one hand from the groups the Graces, the Fates, the pawnbroker's balls on the other, unless *those* groups had each a number that was an instance of a numerical character different to that of which the number of each of *these* groups is an instance. Mr. Russell says, in the *Principles of Mathematics*, that a class can be defined in two ways, extensionally and intensionally. The first way is by enumerating its members, the second by assigning the class-concept that determines membership. These procedures being different, cannot without confusion be both called definition, but let that pass. The extensional way is inapplicable to infinite classes, but the intensional is always available ; for the members of every collection, however miscellaneous, have the common defining characteristic of being this, that or the other individual. How this method could get over the difficulty that makes the extensional method inapplicable to an infinite class, I do not see ; and in *Principia Mathematica* (ed. 2, p. 56n.) he guards himself by saying " when a (*finite*) set of predicates is given by actual enumeration, their disjunction is a predicate."¹ But what I wish to point out is that membership of a class cannot possibly be determined by the character of being this, that or the other member of it. It is also true, though not directly pertinent to my argument for universals, that the predicates in a disjunction of propositions are not a predicate. Mr. Spenslow was either weak or insincere ; the opponent of David Copperfield's marriage was either Spenslow or Jorkins. There is no more such an attribute

¹ italics mine.

as "weak or insincere" than such a person as "Spenlow or Jorkins."

General knowledge, as I believe, is only possible because we can, in some instance, apprehend a connexion of characters to hold in virtue of what they are, and therefore to hold in any other instance of the same; that the twelve Apostles, *e.g.*, are divisible into two groups of six, and so any other dozen into two sixes, because to be twelve and to be six are the same in all instances; and similarly, we apprehend in considering an instance that the deliberate infliction of suffering for the fun of it is evil always. I shall be told that the logical calculus has shown that on the contrary general knowledge is only knowledge of a set of particular propositions. I do not think it has shown this. It relies, I suppose, on the doctrines of formal implication, relation and the variable. The assertion of a formal implication is but the compendious assertion of a set of material implications. The assertion of a material implication requires no such apprehension of connexion between characters as I have spoken of, just as, in the stroke notation, the assertion of what is called incompatibility requires no apprehension that characters cannot be connected. A material implication is just an empirically ascertained fact about the "truth-values" of either or both of the particular propositions related by it. That is why a false proposition implies, and a true one is implied by, all propositions. Hence Mr. Russell naturally finds much more difficulty in a formal implication; for if I have no empirical knowledge of the "truth-values" of all members of the sets of particular propositions which it concerns how can I be justified in asserting it? The answer must be, because I can tell by inspection that either it is false that a certain relation holds between certain terms, or true that another relation holds between those terms or some of them. But how can I see this at once for every case of terms thus related? Because all connexion is the work of relations, and there are no instances of

relation—it is numerically the same relation that does the connecting for different terms. Thus we are to be brought back to particulars ; terms of a kind are not instances of the same, but a class of particulars related by similarity, and similarity is particular because numerically the same between all the terms. And the relations are external to their terms ; for else one dyadic relation could not connect many pairs of terms ; if the same relation can link many terms with another term, the relation cannot in any way be in the term, without making the term complex : the term would have an aspect of identity with another term, and an aspect of diversity, and the method of analysis would have broken down.

Yet will this stand ? if numerically the same similarity holds between every penny and every other penny, and again between every primrose and every other primrose, does it hold between every two members of the classes taken together ? If so, classification is a puzzle ; if not, the terms are concerned in determining the relation between them. There seem then to be instances of similarity, even if it be true that the similarities between every two members of one class of similars are numerically one similarity. And certainly similarity is not the same relation as “greater” or “one less than.” Series are said to be generated by relations, but not all have the same generating relation, and not all relations generate series. Is not then relation a universal, of which the different generating relations, and the relations which generate no series, are either species or instances ? Or are we to speak instead of a class of similar relations, when the whole trouble is that they are dissimilar ? As to series being generated by relations, I should have thought the terms had something to do with it ; else why does the relation “one less than” order the cardinal numbers unambiguously, while the relation “one to the left of” may order men in line in divers ways ?

And if we waive these difficulties, what are we to say of that fundamental thing, a variable? On this matter I think there has been failure sufficiently to distinguish the symbol and the symbolized. "In ordinary mathematics," it is said (*Principia Mathematica*, ed. 2, p. 4), "a variable generally stands for an undetermined number or quantity. In mathematical logic, any symbol whose meaning is not determined is called a variable, and the various determinations of which its meaning is susceptible are called the *values* of the variable." Now what *stands for* a number or quantity, in ordinary mathematics, is a symbol: and that is precisely what does not vary. If x means a line, it is not x but the character of length in the lines that varies. The common nature of all lengths can be called undetermined, when we consider it in abstraction from its determinate values, and this is just what the method of analysis shuts its eyes to. So in mathematical logic, though the symbol is called a variable, that is or should be because it is a symbol for instances of something the same which, because the same in its instances, may be called variable. Yet the symbol itself is called a variable. "A variable is ambiguous in its denotation": x is an unrestricted variable if it can stand for anything. Who would say that the name Jones is a variable because it stands for so many people? The whole trouble of ambiguity is caused because the ambiguous symbol is constant. And logic, and mathematics also, would fall into hopeless confusion unless the use of symbols ambiguous in their denotation were confined within such limits of ambiguity as are fixed by restricting it to things of a common nature. It is perhaps some uneasy suspicion of trouble here that has produced attempts to mend the mischief by introducing the doctrine of the apparent variable, and the distinction in symbolism between ϕx and $\phi \hat{x}$. $\phi \hat{x}$ is a function which ambiguously denotes, ϕx is a value of it ambiguously denoted; ϕx therefore is a proposition, and since a proposition cannot contain a variable, x is only an apparent variable.

But ambiguity can belong only to a symbol, not to what is symbolized. If I say "I met Jones," my statement may be ambiguous, but he is not. The distinction between $\phi\hat{x}$ the function, and ϕx the ambiguous statement about any value of the function, will not stand. $\phi\hat{x}$ may be a single symbol which ambiguously denotes its many values, as "Jones" is a single name which ambiguously denotes many men. Incidentally, if a word is a class of similar noises (*ib.*, p. 661), $\phi\hat{x}$ is a class of similar scratches, but let that pass. ϕx , however, cannot be an ambiguous value of $\phi\hat{x}$, any more that Sir William Jones was an ambiguous value of the name "Jones." The introduction between the ambiguous propositional function " \hat{x} is hurt" and the unambiguous proposition " a is hurt" of the ambiguous value of the former " x is hurt" is merely a riding of two horses at once—substituting at will for one another the symbol and the symbolized, the constant and the variable, the bare particular and the instance of a common nature or universal.

II. *By F. P. RAMSEY.*

Although Mr. Joseph has not fully understood the argument of my article in *Mind*, which he finds so unconvincing, I do not think that, if he did understand it, he would find it any more cogent, for my discussion of the question assumes so many things with which he disagrees, that I do not expect him to find it in the least adequate. It seems to me, therefore, better to begin from his end and to discuss what I take to be the most important doctrine in his paper (apart from a rejection of analysis too vague and general to be discussible), which is explained on p. 8 ff.; namely, that there is a valid distinction between particulars and universals which is neither that of substance and attribute, nor that of subject and predicate, but such that "no universal is ever predicated of a particular" (I would rather have said of an individual).

If I understand this view rightly, it implies, that it is impossible for two things to have the same colour or the same shape; they can only have instances of the same. But I do not know whether this is asserted with regard to all characters whatever, or only with regard to certain characters such as colours, shapes and magnitudes. It seems to me that the only way to make it plausible would be to assert it with regard to all characters, but that to do this would lead at once to a vicious infinite regress. For if two things can never have a common character, they cannot both have the common character of having instances of the same colour; they can only have instances of this character. So that they cannot even have instances of the same colour, but only instances of having instances of the same colour and so on *ad infinitum*. In brief, if as Mr. Joseph says about magnitude,

"the same" can only mean "instances of the same," "instances of the same," can only mean "instances of instances of the same."

I conclude that it is only possible to hold Mr. Joseph's position in regard to some but not all characters. And if this be admitted, I should have thought that the question as to which characters things can have in common and which they cannot, becomes an empirical one; and although I realise the cases are not formally parallel it seems to me as absurd to say *a priori* that two things never have the same colour as it would be to say that two houses never have the same landlord, or two men the same father.

Besides this, unless I have misunderstood it, Mr. Joseph's view is open to a quite different and still more serious objection. He says no universal is ever predicated of an individual, but, I gather, that what is predicated of an individual is an instance of a universal. Thus in "The curtain is red" the predicate is not the universal redness, but the particular instance of it attaching to the curtain. This view can, I think, be definitely refuted by considering the case when the proposition is false. For then there is no such thing as an instance of redness attaching to the curtain, and this cannot therefore be the predicate of the proposition. Now what is the predicate of the proposition cannot depend on whether the proposition is true or false, since unless the predicate is definite, there is nothing to be either true or false. Hence the predicate of "the curtain is red" cannot, even when the proposition is true, be the instance of redness attaching to the curtain.

It seems to me, therefore, that Mr. Joseph's view is open to decisive objections, and as I cannot see anything whatever to recommend it, I think the reason why he holds it must be found in certain simple confusions. The most important of these is the confusion of a thing's character with the fact that the thing has that character, and the confusion of a relation holding between

two things with the fact that it holds between them. A fact is anything which is the case ; thus it is the case that I am writing in ink, and that is a fact. We could say "It is a fact that I am writing in ink," and talk of the fact that I am writing in ink. On the other hand I, writing, and ink are not in this sense facts (or at least apparently not). We cannot talk of "the fact that I," the fact that writing, or the fact that ink. Any proposition asserts a fact which exists or is the case if the proposition is true, but not if the proposition is false. On the other hand the subject and predicate of a proposition must exist for it to be a proposition at all, true or false, but if it is false its subject and predicate are not united in a fact. In the proposition "this is blue," the subject is (apparently)*, this, the predicate blue, and the whole proposition asserts the fact that this is blue.

It looks to me as if very frequently when Mr. Joseph speaks of instances of qualities and relations, he means the facts that things have the qualities and stand in the relations. Thus by the colour of the wall he means the fact that the wall has that colour, and this is what would often, though not always, be meant by the phrase in ordinary life. For if "the colour of the wall is surprising" what is surprising is probably not the colour itself (mauve, magenta or whatever it may be), but the fact of the wall's having that colour. And if "the illness of the centre forward is disastrous" the disaster is constituted not by influenza but by the fact that the centre forward has influenza.

Again it is often evident that philosophers talk of relations, *e.g.*, in discussing knowledge of relations, where they really mean relational facts ; and if a man notices the similarity of two things, what he really notices is the fact that they are similar.

It will, then, I hope, be agreed that, by an instance of a quality, Mr. Joseph often means the fact that something has

* I say apparently because I think that further analysis may be possible.

this quality. Nor would there be any reason why this should not be called an instance of the quality, if the use of the word instance had not misleading associations due to its being often used in quite another sense, in which I think, Mr. Joseph also uses it without any consciousness of the equivocation. For he speaks as if cows were instances of cowhood (p. 11), and here the meaning of instance is entirely different. For the sense in which cows are instances of cowhood, is that the instances of a character (cowhood) are the things which have that character (cows); and in this sense of instance the instances of redness will be red things, *e.g.*, red curtains, red bindings, and so on. Clearly this is a different usage of instance from that in which the instances of redness are the facts that things are red. The difference could only escape detection because the fact that the relation of a red curtain to redness is the same as that of a cow to cowhood is concealed by our saying the cow is *a* cow, but the curtain red (not *a* red). But even supposing we entirely abandon this second and to me more familiar use of instance, by which the instances of cowhood are cows, Mr. Joseph's first use of instance has led to a fundamentally false view of propositions and their terms. For what he calls an instance of redness, the fact that this is red is what is asserted by the whole proposition, not what is expressed by the predicate of it. The predicate is not the fact that this is red, but just red and is the same in both "this is red" and "that is red," though, of course, the fact that this is red is a different fact from the fact that that is red.

Although I do not think a discussion of them will throw much light on the question of universals, I cannot allow Mr. Joseph's remarks on cardinal number to go without comment. He attacks the definition of a number as a class of classes on the score of circularity, but I have not been able to discover precisely at which stage the circle is supposed to be made. Let us take the definition step by step. We begin by defining the similarity

of classes. We call two classes similar when there is a one-one relation whose domain is one class and whose converse domain the other. This part of the definition is the work of Georg Cantor and the whole theory of infinite aggregates rests upon it; it defines similarity not in terms of number, but in terms of the notions of one-one relations, their domains and converse domains, none of which, as may be seen by referring to *Principia Mathematica*, involve the idea of number. Next we define the number of a class to be the class of classes similar to it in the sense of similarity just defined. In this there is nothing circular. Finally, we call a number anything which is the number of a class; number being thus a relative term like father; a father is anyone who is the father of a child. As I understand Mr. Joseph's argument, up to this point he had no quarrel with the definitions. He seems to allow a class of all classes similar to a given class to be a valid notion, but asks what it is that distinguishes the class of dozens from the class of trios, each of them being a class of all classes similar to a given class. The answer to this is, of course, to be found not in the definition of number in general, but in the definition of the particular numbers 3 and 12. They can be defined in terms of 1 and +3 as $1+1+1$ and 12 similarly; 1 is the class of existent classes A such that if x and y are any members of A x is identical with y . $m+n$ is the number of a class formed by putting together a member of m and a member of n which have no common members.

To these definitions it is impossible to take any reasonable exception, and Mr. Joseph's objection to the theory comes from not having followed it far enough. That is in so far as he objects that it is circular. He appears also to object that it is absurd. "One might as well say that a cow is the class of all animals similar to a given animal, as that a cardinal number is the class of all classes similar to a given class." But these two statements are not parallel; what are parallel are first the reasonable pair.

"The class of cows is the class of all animals similar to a given animal." "The number 3 is the class all classes similar to a given class," and secondly the absurd pair "A cow is the class of all animals similar to a given animal," "A trio is the class of all classes similar to a given class." Mr. Joseph might also say that the definition could be bettered, that we could define 2 as a numerical character common to pairs; for instance, as the character of having non-identical members, x , y , such that any member w is identical with x or y . This is a character of pairs and of no other classes, and we could construct a similar definition for any other finite number. But we could not on these lines give any general definition of number, and we should be absolutely helpless with regard to infinite numbers unless we defined them by means of similarity. As to the utility of these definitions which Mr. Joseph questions, the theory of irrational number, which he includes in the same category, has been the foundation of an enormous amount of recent work, and, as previously mentioned, the theory of infinite aggregates rests entirely on the definition of similarity.

In the rest of his paper Mr. Joseph points out various difficulties in the philosophy of logical atomism, which would vanish if he understood it better. For instance, it is not necessary for Mr. Russell to hold that all classification is by means of transitive symmetrical relations; things can also be of a kind by having the same (literally the same) quality. Also similarity is not the name of one relation, but a general name for many transitive and symmetrical relations. Relations generate series if they are transitive, asymmetrical and connected; and if Mr. Joseph will look up the definitions of these terms he will see that they are not adjectives of the relations in themselves, but statements about what pairs of terms the relation unites. As to why "one to the left of" does not generate an unambiguous series, it is principally because it isn't a dyadic relation at all unless a position

of reference is understood. " a is one to the left of b " does not mean anything by itself, any more than " a is distant" does. Just as we need to be told from what a is distant, so we need to be told from what point of view a is to the left of b . Mr. Joseph's problem is like the question, why right and left are reversed in a mirror when up and down are not?

Finally he takes up the fundamental question of the variable. I cannot defend all that is said in *Principia Mathematica* about variables, but I believe the truth about them to be simple and directly contrary to Mr. Joseph's views. All variables are really apparent variables; and therefore, we have not to explain what is meant by a variable by itself but only what it means in connection with a prefix; and we explain $(x) \phi x$ as the compendious assertion of all propositions of the form ϕx . x is thus a symbol meaning not, like "Jones," many different things on different occasions, but many different things at once; namely, all things whose names can be significantly inserted as arguments to ϕ . The alternative that x is the name for a variable thing, I can only regard as nonsense.

I should like in conclusion to say something about my own position. When I wrote my article, I was sure that it was impossible to discover atomic propositions by actual analysis. Of this I am now very doubtful, and I cannot therefore be sure that they may not be discovered to be all of one or other of a series of forms which can be expressed by $R_1(x)$, $R_2(x, y)$, $R_3(x, y, z)$, etc., in which case we could, as Mr. Russell has suggested, define individuals as terms which can occur in propositions of any of these forms, universals as terms which can only occur in one form. This I admit may be found to be the case, but as no one can as yet be certain what sort of atomic propositions there are, it cannot be positively asserted, and there is no strong presumption in its favour, for I think that the argument of my article establishes that nothing of the sort can be known *a priori*.

And this is a matter of some importance, for philosophers, such as Mr. Russell have thought that, although they did not know into what ultimate terms propositions were analysable, these terms must nevertheless be divisible into universals and particulars, categories which are used in philosophical investigations as if it were certain *a priori* that they would be applicable. This certainty seems to be derived primarily from the supposition that there must be a difference between ultimate objects, analogous to one felt between to subsist between such terms as Socrates and wise ; and to see if this can reasonably be maintained we must discover what difference there is between Socrates and wise, analogous to the distinction made in Mr. Russell's system between particulars and universals.

If we consider the development of Mr. Russell's system of logic, as expounded in the introduction to the 2nd edition of *Principia Mathematica*, we can see what difference there is in his treatment of particulars and universals. We find that universals always occur as propositional functions, which serve to determine ranges of propositions, especially the range of values of the function ϕx , and the range of functions of the function $(b|(\phi x))$ (where f is variable). Individuals also serve to determine ranges of propositions, but in this case there is only one principal range, the range of functions of the individual ϕa (ϕ variable). We could make a narrower range, as Mr. Russell points out, by using, a variable quality, but we have no need to do so. Now this is the only difference between the way individuals and universals function in his system, and as we find that there is a precisely similar difference between Socrates and wise, it is probable that we have here the essence of the matter. Wise like a ϕx in Mr. Russell's system determines the narrower range of propositions " x is wise" and the wider one b (wise), where the last range includes all propositions whatever in which wise occurs. Socrates, on the other hand, is only used to determine the wider range of

propositions in which it occurs in any manner; we have no precise way of singling out any narrower range. We cannot do it by limiting it to propositions in which Socrates occurs as subject, because in any proposition in which he occurs he can be regarded as the subject, we can always regard the proposition as saying "It is true of Socrates that——." The point is that, with Socrates the narrower range is missing, not, as Mr. Joseph makes me say, the wider.

The propositions I chose as examples appear to have misled Mr. Joseph in a way I do not quite understand. I gave as an example of a proposition in which wise occurs not as predicate, but in some other way. "Neither Socrates nor Plato is wise." I chose this example because it illustrated a point, which I did not explicitly mention on account of the difficult controversies with which it is intimately connected; namely, that a proposition in which wise occurs not as predicate is, if not always, at any rate usually a truth-function of propositions in which wise occurs as predicate (and perhaps other propositions in which it does not occur at all). Thus "Neither Socrates nor Plato is wise" is a truth-function of "Socrates is wise" and "Plato is wise," and the same is true of Mr. Joseph's examples. "No one remembered that poor wise man" is a truth-function of "he (the man) was wise" and other propositions not containing wise, viz.: "he was poor," "he was a man," "No one remembered him." "Wisdom is scarce" means "the number of x 's such that x is wise is small, and so is a truth-function of the values of x is wise, although to demonstrate this would take too long here. Mr. Russell would say that this was the case with any proposition in which "wise" occurs, and I am inclined to agree with him. but the question is difficult and I do not want to discuss it now, so I will merely say that it is usually the case. Usually, then, if wise occurs in a proposition it is as part of an " x is wise" which is part of the proposition. And wise therefore, appears

incomplete, and unsubstantial and essentially a predicate of something else.

Nevertheless this difference between Socrates and wise is illusory, because it can be shown to be theoretically possible to make a similar narrower range for Socrates, though we have never needed to observe this. Nevertheless, once this fact is observed, the difference between Socrates and wise lapses, and we begin like Dr. Whitehead to call Socrates an adjective. If you think, all or nearly all propositions about material objects are truth-functions of propositions about their location in events, then, on my view, you will regard material objects as adjectives of events. For that is the real meaning of the distinction between adjective and substantive. I do not say that the distinction has arisen from explicit reflection about the difference in regard to ranges of propositions, but that this difference obscurely felt is the source of the distinction. My view is strikingly confirmed by the case of Dr. Whitehead, who having made material objects analogous to wise in the way in question, then declared that they were adjectives.

III. *By* R. B. BRAITHWAITE.

MR. RAMSEY'S paper in *Mind*, which I understand is the basis of this symposium, seems to me to have two objects:—(1) to prove that the distinction between particulars and universals arises from a difference in the number of ways in which they can occur in propositions—the latter having two ranges of occurrence, whereas the former have but one; (2) consequently, to prove that the distinction is a subjective one and of no metaphysical significance. Mr. Ramsey sometimes speaks as if there were really no distinction whatever between particulars and universals, and it is certain that he does not regard it as having anything like the importance of the distinction between names and incomplete symbols: nevertheless, I think it is clear that the difference in the number of ways in which terms can occur in propositions—a difference which Mr. Ramsey thinks is derived from the uses of incomplete symbols—is the only way which claims to be a philosophical distinction and the "real meaning of the distinction between adjective and substantive."

It is in consequence of his belief that this is the real distinction that Mr. Ramsey believed when he wrote his paper that the distinction is not ultimate, and now believes that the distinction cannot be shown *a priori* to be ultimate. But it is, of course, possible to hold either or both of these propositions without accepting Mr. Ramsey's first proposition: this is the position that I wish to maintain. I do not think that Mr. Ramsey's analysis of the difference between universals and particulars is the correct one; I do not believe that it is a subjective distinction, nor one imposed upon us by our methods of symbolizing; but

I am not so bold as to maintain that it is an ultimate distinction. In sympathy with the trend of thought of the "Method of Analysis" of Mr. Russell, Mr. Wittgenstein and Mr. Ramsey, I do not think that much can be said about the nature of the ultimately atomic facts (if there are such things), and so I do not think that the difference between universals and particulars can be shown to be an ultimate one. Nevertheless, what Mr. Ramsey takes to be the "real meaning of the distinction" is for me a consequence of the distinction, and not the distinction itself.

I believe the distinction is between the differing spatio-temporal relations of particulars and universals. This is an objective distinction not dependent "on human interests and needs": nevertheless I should not like to say that it was an ultimate one. Any such distinction Mr. Ramsey dismisses contemptuously at the beginning of his paper as not a logical distinction. Mr. Ramsey is here discussing very summarily the three kinds of distinction between particulars and universals that Mr. Russell in his Aristotelian Society paper of 1911 thought worthy of investigation. These kinds of distinction Mr. Ramsey calls psychological, physical and logical; and he dismisses the first two of these as irrelevant. I agree with him about the psychological difference between a percept and a concept; but I cannot agree with his rejection of the second sort of distinction. Mr. Ramsey writes as follows:—"Next we have various distinctions between objects based on their relations to space and time; for instance, some objects can only be in one place at a time, others, like the colour red, can be in many. Here again, in spite of the importance of the subject, I do not think we can have reached the essence of the matter. For when, for instance, Dr. Whitehead says that a table is an adjective, and Mr. Johnson that it is a substantive, they are not arguing about how many places the table can be in at once, but about its logical nature.

And so it is with logical distinctions that our inquiry must mainly deal." (*Mind*, Vol. 34, p. 402.)

Mr. Ramsey obviously thinks that this sort of distinction is disposed of by stigmatising it as "physical." But would he contend that any discussion of the spatial and temporal relations of objects was a "physical" one? When Dr. Moore discusses the "Pickwickian senses" in which physical objects are in space and time, or when McTaggart treats of the relations of Time to Eternity, are these questions for physics? Surely they are rather questions for what Dr. Whitehead calls "panphysics" and most of us "metaphysics." And if metaphysical distinctions are to be dismissed as not logical and hence irrelevant, this can only be because Mr. Ramsay has made up his mind beforehand that the distinction between universals and particulars is a purely logical distinction in a very restricted sense of the word "logical." His reasoning is of the same sort as that of those psychologists who, convinced that all differences in the workings of a mind are differences in bodily behaviour, reply to a critic, who suggests that there may be an ultimate psychological difference between conscious and unconscious acts; "Ah, but that isn't a difference in behaviour."

I believe that the distinction between particulars and universals is due to their different relations to space and time in the primary propositions. By primary propositions I mean propositions asserting that some definite occurrence has some property, and I agree, I think, with the majority of logicians in taking such propositions as primitive. Mr. Johnson, for example, in the second chapter of his *Logic, Part I*, starts with such a proposition as the exclamatory "Lightning!" This proposition, which is of a type "psychologically prior even to the most elementary proposition that can be explicitly analysed," he considers may be taken as equivalent to the developed proposition "A particular portion of reality manifests the character lightning."

Here, I contend, the distinction between particular and universal has already appeared. The particular portion of reality is the particular, because this has a definite position in space and time ; the character lightning is the universal, because this has no definite position in space and time. The former is here and therefore not there, now and therefore not then ; whereas the latter—the character of being lightning—is indeed here, but it may be there as well, now, but it has also happened in the past and may happen again in the future. In a word, the particular occurrence is unique in space and time—its happening at one place and time prevents its happening at another place and time—whereas a universal has no such unique relation to space and time. ||19|4

If I thought it possible to believe in an absolute theory of space and time, I should maintain that point-instants were the only particulars, since they alone had definite positions in space and time and the relations of other things to space and time were derivative from their relations to points. And since it is this fact of having definite immediate position in space and time that I take to be the criterion for a particular, I should be unable to make the distinction which Mr. Johnson and Dr. Broad succeed in making between substantial and adjectival theories of space and time. Mr. Johnson, for example, puts forward an absolute but adjectival view : “ in holding that ‘ occupying a certain instant ’ is an unanalysable adjectival predicate, we maintain at the same time that, *qua* predicate, it is an identifiable entity, in the same way as the adjective ‘ red ’ is an identifiable entity when predicated now of this patch and then again of some existentially other patch ” (*Logic, Part II*, pp. 165–166). But if “ point-instant ” be substituted for “ instant,” and this substitution seems to me to be inevitable in any fundamental metaphysical investigation, we see that there is the very important distinction between the predicates (assumed unanalysable) “ occupying a

certain point-instant" and "red" that, unlike the latter, the former cannot "be predicated now of this patch and then again of some existentially other patch." Since it is just this distinction that I maintain is the distinction between particular and universal, I cannot agree that "occupying a certain point-instant," if it were unanalysable, would be a universal. "The colour red is occupying a certain point-instant" would, on Mr. Johnson's theory, be expressing a relation between two universals; but it seems to me quite clear that the relation of particular to universal has arisen out of consideration of propositions just like this, and that in these it is the element with the space-time reference, whether or not it is the grammatical subject of the sentence, that is the particular.

Because I do not think it possible to believe in any non-relational theory of space and time, I do not think it plausible to consider point-instants as the ultimate entities in space-time. These are logically constructed out of events in the manner shown by Dr. Whitehead. Since events are extended in space and time, our criterion to distinguish particulars from universals must be altered a little if we wish to retain events as particulars. For an event is necessarily extended in space and time, and consequently occupies many positions in space-time. Nevertheless it has definite boundaries in space-time (which are usually treated, though without much reason, as small); and so the difference between particulars and universals can be stated as follows: *If it is logically impossible for the thing to occupy two or more separate volumes in space-time; it is a particular, if this is logically possible, it is a universal.*

Now it is that we can see why it has always been thought that a primary proposition consists of a universal qualifying a particular. It cannot consist of two universals, because then there would be no space-time reference and the proposition would not be a primary proposition in my sense. And it cannot consist of

two particulars, because of an empirical property that most particulars have—that two particulars cannot occupy exactly the same volume. Consequently, there must be at least one particular and one universal—quality, relational property or relation—in the primary proposition. It is also apparent what is meant by saying that a universal is incomplete. What is meant is that in itself it has no space-time reference and requires this to complete it.

Now we can see how it comes about that there are two ranges of occurrence of universals but only one of particulars in propositions. We can and do distinguish propositions according to whether the universal occurs as directly characterizing the event or not, and most (if not all) of those which are not primary propositions we regard as truth-functions of primary propositions. Consequently there are two ranges of occurrence of universals—those in primary propositions in which the universal characterizes a simple particular, and all those in which it occurs. It is the spatio-temporal characteristics of particulars that prevent our regarding all secondary propositions as asserting characteristics of compound substantives, in which case it would not be possible to make the distinction we do. Mr. Ramsey refers to the fact pointed out by Mr. Johnson that we “may properly construct” compound adjectives but not compound substantives, but neither give any reason for it. I think the reason is quite clearly this—that we expect that substantives shall not be able to occupy the same position, whereas we expect that adjectives shall be able (unless they are incompatible). So we think a compound adjective is a genuine adjective, but we do not think that a compound substantive is a genuine substantive.

This point comes out most clearly when we consider the characteristics of the few cases in which we do allow compound substantives. We consider that a mixture of oxygen and nitrogen has as good a claim to be considered a substantive as either gas

alone: this, I maintain, is because each spatio-temporal part of the mixture contains both oxygen and nitrogen.* And if, with Mr. Johnson, you resolve an event into occurrents so that "the several occurrents which thus compose an event are distinguished, not by the spatio-temporal position which they occupy, but by the different adjectival determinables under which their determinate character falls,"† we may rightly treat the event compounded out of these occurrents as of the same nature as the occurrents themselves, since they all have the same spatio-temporal boundaries. If we consider the event which is the flash of lightning as two occurrents, one occurrent being what emits waves of light and the other what emits waves of sound, then since the two occurrents together in the same position make up the event, we may consider the event of the same degree of particularity as the component occurrents.† Our general prejudice against compound substantives is because cases such as these are very rare, being met with only in the theory of solutions, the theory of gases and the theory of knowledge.

I have shown that, according to my criterion as to what are universals, we can distinguish two ranges of their occurrence in propositions according to whether the propositions are limited to being primary propositions attributing the universal to a particular event or are all the propositions in which the universal occurs. Contrariwise, according to my criterion of what are particulars, we cannot distinguish two ranges of occurrence of particulars. Since universals (unless they are incompatible) can occupy the same spatio-temporal position, we cannot distinguish compound

* Of course, on my view, it would only be the events which were the situations of the gases during a period of time that would be the substantives.

† *Logic, Part III*, p. xxii. I don't think Mr. Johnson's analysis of each event into many occurrents is correct. It seems to me merely a matter of the events having many different properties.

from simple universals, and consequently we regard all propositions about particulars as being of the same type; namely, those predicating universals, simple or compound, of the particulars.

So I think that the important distinction in the number of ranges of propositions is derived from a spatio-temporal distinction between particulars and universals, and not the other way round, as Mr. Ramsey thinks. To support his argument Mr. Ramsey describes the process by which Dr. Whitehead and others have been led into treating physical objects as universals instead of as particulars, as the discovery that propositions about physical objects are of two kinds, one of which can be analysed in terms of the other. I don't think Dr. Whitehead puts the cart before the horse in this manner. His process seems to me to be more or less as follows:—

For various reasons—some epistemological, some based on spatio-temporal considerations—he came to think that events had more claim to be considered as the ultimate particulars than physical objects. This being first decided, it was then necessary to consider how propositions about physical objects could be analysed, and it was discovered that it could be done in terms of propositions about events. Subsequently, it was necessary to distinguish propositions about physical objects into two classes—the class of those directly asserting a relation to an event, such as “The object A is situated in the event E,” and the class of all propositions about physical objects, which he had shown to be truth-functions of propositions of the first class.

It will be seen that I regard all propositions about physical facts as truth-functions of my primary propositions about events. But what about mental facts? Are they truth-functions of propositions about mental events? I confess I do not know. But it does seem to me that the difficulty there is in deciding whether there are *Erlebnisse* which are the con-

stituents of mental facts, is due to the fact that it is extremely doubtful if such things would be in space and time. Dr. Moore, in rejecting as obvious the analysis of "I am conscious now" into "There is occurring now an event which is an experience and which is an experience of mine," is rejecting the only obvious way in which the proposition might be considered to be about a particular. So, though it does not seem to me plausible to maintain dogmatically that all mental facts are about mental events in space and time, it does seem plausible to assert that if this is not the case, no distinction of the elements of propositions about mental facts into particular and universal is possible. This conclusion has been reinforced by reading the 1918 Symposium on the subject, "Do finite individuals possess a substantive or an adjectival mode of being?"

The criticism that will most naturally be made to the criterion that I have put forward to distinguish between particulars and universals is to ask what reason I have for supposing it to be more ultimate than the distinction between permanent substances and their properties which used to be considered the criterion. Dr. Whitehead has shown that propositions about chairs and tables can be analysed into propositions about events: what reason have I for thinking that propositions about events are the primary ones and, consequently, what reason have I to think that a distinction which on my own showing only arises in such propositions is of any ultimate importance? If events turn out after all to be logical constructions in terms of something simpler, will not my distinction be as subjective as Mr. Ramsey's distinction is? Will not events be only relative particulars—particulars relative to objects and properties of events, just as permanent objects may be considered as particulars relative to their properties?

The best answer to this attack is, I think, an *argumentum ad hominem*. If you are going to dismiss into the realm of

logical constructions those things which have the greatest claim to be considered both epistemologically and metaphysically primitive, it must be on some very general *a priori* ground, which must show not only that events cannot be the ultimate simples out of which the world is made, but also that there are such absolute simples. For if there are not, the place to start in the hierarchy of relative particulars is not purely logically determined, and a better case can be made out for starting with events than with anything else. Are there absolute simples? Mr. Russell, Mr. Wittgenstein and Mr. Ramsey are convinced that there are. "When I speak of 'simples,'" writes Mr. Russell, "I ought to explain that I am speaking of something not experienced as such, but known only inferentially as the limit of analysis . . . I confess it seems obvious to me (as it did to Leibniz) that what is complex must be composed of simples, though the number of constituents may be infinite."* And Mr. Wittgenstein's reason for his aphorism (2.02) denying the complexity of his objects (which are the same as Mr. Russell's simples) he states as follows:—"If the world had no substance [*i.e.*, if there were no simple objects], then whether a proposition had sense would depend on whether another proposition were true" (*Tractatus Logico-Philosophicus*, 2.0211). I understand that this comes about as follows: Propositions asserting the existence of complexes are only true if the proposition that the elements of the complex are combined in such a way as to make up the complex, is true. Hence, if we give a name to the complex, either the name is an abbreviation for a definite description of the complex or the significance of the name depends upon the truth of a proposition; namely, that the elements are

* Contribution to *Contemporary British Philosophy*, I, p. 375 (1924). However, in 1918 Mr. Russell thought that "it is perfectly possible to suppose that complex things are capable of analysis *ad infinitum*, and that you never reach the simple." (*Monist*, vol. 28, p. 526.)

arranged in a certain way. This latter alternative is considered absurd; consequently we must believe that complexes are logical constructions from simples. I cannot agree that there is a fatal objection to the second alternative. We do not know whether many of the words we use are true proper names or abbreviations for descriptions, and it seems to me by no means certain that there cannot be a third class of improper names which have no significance unless certain propositions (which we do not know) are true. Indeed, I am not sure that this is not the case with many of the words that have most claim to be proper names. "This," referring to a sense-datum immediately perceived, is frequently given by Mr. Russell as an example of a proper name (perhaps of the only proper name); yet I think it can be argued that it only acquires meaning through the fact that I am referring to it, *i.e.*, that the proposition that I am referring to this sense-datum, is true.

It seems to be possible that our use of a great number of words does presuppose the truth of certain propositions, and I cannot see that this in itself is an objection to any theory. The infinite regress contradiction only arises when the meaning of a word presupposes understanding the meaning of another word which presupposes understanding the meaning of another word, and so on. But in the case we are considering, the meaning of a word does not depend upon understanding the meaning of another word, but upon the truth of certain propositions, *i.e.*, unless these propositions are true, we cannot understand the meaning of a word for a complex. And I do not think that it is an absolute refutation of a theory to show that it involves that, were it not for certain facts, we should be unable to have a language; because this proposition is, to say the least, not obviously false.

If there is not much reason to suppose that there are any absolute simples, the fact that it would be very difficult to maintain that events are absolute simples need not prevent me from

maintaining that events are true particulars. Most, if not all, events have other events as parts ; and it is plausible to suppose that many events have an infinite number of events as parts. And it may quite well be the case that, unless the event was made up in the way it is, we should be unable to refer to it by name. But this does not prevent our doing so. There seems every justification for stopping our analysis at events. Events are the sort of thing with which we are directly acquainted, events are the best sort of material for building up the things required by science, and it seems likely that further analysis of events will be only in terms of other events. [It may be possible, for example, to construct all events over or under a certain spatio-temporal size out of events of a certain size or range of sizes.] And, above all, events quite certainly and directly have spatio-temporal relations to one another, and can be distinguished from one another directly by these relations. So though I do not contend that a distinction between universals and particulars based on spatio-temporal considerations is logically ultimate, I do contend that it is based upon a fundamental characteristic of reality ; namely, that things are in space and time. To get behind this all-pervading fact in search of the Logical Absolute seems to me impossible ; and to expect this distinction, which I believe we only apply within space and time, to hold if we can get beyond space and time seems to me unreasonable. When Dr. Whitehead says that a table is an adjective and Mr. Johnson that it is a substantive, I believe they are quite literally arguing about how many places the table can be in at once, in that Dr. Whitehead maintains that it is everywhere where what would be called in physics its " field of force " is, whereas Mr. Johnson maintains that it has as definite spatial boundaries as an event has.

II.—SYMPOSIUM: THE NOTION OF EMERGENCE.

By E. S. RUSSELL, C. R. MORRIS, and SIR W. LESLIE MACKENZIE.

I. By E. S. RUSSELL.

LIVING things, as we know them, exhibit certain qualities or properties which appear to be characteristic, and not shared by other material objects. They develop from a simple to a more complex form, with a concomitant differentiation of function; they maintain their specific form and activities by means of a constant interchange with their environment, and up to a point in spite of changes in their environment; they reproduce their like. Are these characteristics irreducible to the properties of simpler material complexes, and if so, what is the ground of their irreducibility?

Dr. C. D. Broad in his book *The Mind and its Place in Nature* (1925) discusses three possible answers to this question—those given respectively by the theories of Substantial Vitalism, Emergent Vitalism and Biological Mechanism.

According to the first of these theories vital characteristics are irreducible, and the ground for this lies in the presence of a special component in living things which is absent in dead or inorganic things. This type of theory, of which the best example is that of Driesch, is what is commonly meant by vitalism, and I am at one with Dr. Broad and the majority of biologists in rejecting it. I agree entirely with Dr. Broad's demonstration that an entelechy must have miraculous and God-like powers if it is to do the work demanded of it, and I do not think that the concept is really useful in biological work.

Of the other two theories, one, Emergent Vitalism, claims that vital properties are irreducible, the other, which is that upheld by the majority of biologists, that they are reducible to physical and chemical properties which are common to inorganic and inorganic things.

What is the difference between these two theories? Let us take Dr. Broad's very clear definitions. A biologist is to be regarded as a Mechanist if he asserts "that a living body is composed only of constituents which do or might occur in non-living bodies, and that its characteristic behaviour is wholly deducible from its structure and components and from the chemical, physical and dynamical laws which these materials would obey if they were isolated or were in non-living combinations" (p. 46). "Put in abstract terms the emergent theory asserts that there are certain wholes, composed (say) of constituents A, B, and C in a relation R to each other; that all wholes composed of constituents of the same kind as A, B, and C in relations of the same kind as R have certain characteristic properties; that A, B, and C are capable of occurring in other kinds of complex where the relation is not of the same kind as R; and that the characteristic properties of the whole R (A, B, C) cannot, even in theory, be deduced from the most complete knowledge of the properties of A, B, and C in isolation or in other wholes which are not of the form R (A, B, C). The mechanistic theory rejects the last clause of this assertion" (p. 61). This latter definition is, of course, applicable not only to the emergence of vital qualities from chemical or colloidal properties, but to each stage of the emergent process, from elementary matter upwards. We owe particularly to Prof. Lloyd Morgan from the scientific side the elaboration of the notion of emergence as applied to all stages of increasing complexity of matter. There is emergence of new qualities, he holds, at every substantial complication of structural plan—from the electron to the atom, the atom to the molecule,

and so on up to the living organism. The best and simplest example of emergence is indeed to be found in chemical combinations. From what we know of oxygen by itself, and of hydrogen by itself, and of either in any other but reciprocal combination, it is impossible to deduce or predict the properties of water, in which the two are combined together in definite proportions. The properties of water are no doubt completely determined by its constituents and their structural arrangement, but the new properties are not deducible from the properties of the constituents—they are emergently new.

Let us accept for the moment the emergent theory with regard to living things, for it appears to have much in its favour—most biologists even would go at least so far as to agree that many vital properties are *not yet*, in the present state of knowledge, reducible to properties of simpler aggregates. It seems to follow, if we accept the notion of emergence, that we must recognise the existence of different kinds of laws applicable to living things. There would be laws relating to the irreducible or ultimate characteristics of living things—laws of development, reproduction, adaptability, perhaps even of cell-division and cell-differentiation. There might be provisional laws relating to the “reducible characteristics” of living things—to those physiological functions, for instance, that turned out to be purely physico-chemical. Finally there would be laws applicable to the characteristics common to living things and aggregates of lower degree, and these laws would be common to two or more orders of aggregates.

The mechanist could not on principle admit the possibility of irreducible biological laws of the first order; he could accept the second kind of laws only provisionally and he would try all the time to reduce them to the laws of the third kind—those common to living things and objects of a less degree of complexity. He would be entitled to ask why certain vital characteristics were

marked off as irreducible—and it would be difficult on the Emergent Theory to answer him, except by saying “Go ahead and try; you will certainly fail.” This brings me to the main objection I have to raise to the emergent theory as applied to living things—that it is not in practice sufficiently different from Biological Mechanism. “On both theories,” Dr. Broad points out, “the peculiar behaviour of an organism is completely determined by its structure and its components and by nothing else. The only difference is that on the Emergent View the peculiar behaviour of such systems must be ‘seen to be believed,’ whilst on the Mechanistic View it could in theory have been foretold from the structure and the behaviour of the components in isolation or in non-living wholes” (p. 92). The mechanist is therefore fully justified in going on with his work of analysis in the hope that some day, when knowledge is more complete, even the apparently irreducible properties of living things will yield up their secret and come into line with the reducible qualities. This is, in effect, the attitude taken up by perhaps the majority of biologists. They would perhaps admit that in the long run physics and chemistry may not suffice for a full explanation of vital phenomena, but they would say that there is no other way apparent, and that in any case physics and chemistry must be given a full trial. Only if and when these definitely fail in practice need other methods be tried or the problem be given up as insoluble. Dr. Broad sums up the position well, I think, when he writes: “Within the physical realm it always remains logically possible that the appearance of emergent laws is due to our imperfect knowledge of microscopic structure or to our mathematical incompetence” (p. 81).

The fundamental assumption of the Emergent Vitalist appears to be the same as that made by the Mechanist—that the activities of the living thing are completely determined by its physico-chemical constituents in the particular arrangement which

characterises living bodies. It would seem that his method of attack upon biological problems should be the same as that adopted by the Mechanist, with this difference only, that he would reserve certain characteristic activities as being outside the reach of analysis. The Mechanist may well maintain, as against this view, that we do not know what characteristics are irreducible until we try. In practice there seems to be little difference between the two views.

The position of Emergent Vitalism as an alternative to Biological Mechanism seems then to me a little precarious. That is not to say that I believe in Biological Mechanism. I hold that the Emergent Vitalist has right on his side, but that his position needs to be greatly strengthened before it can resist the attacks of the Mechanists. I further hold that the real ground for the uniqueness of certain vital characteristics, their irreducibility to simpler components, lies in the fact that Mind comes into play in all distinctively vital functions. I have ventured to maintain this thesis in a previous Symposium in which Sir Leslie Mackenzie took part (see *Relativity, Logic and Mysticism*, Aristotelian Society, Suppl. Vol. III, 1923) as also in a little book *The Study of Living Things* (1925). I do not propose to develop this thesis at all fully here—limitations of space indeed forbid it—but I think I can make the essential points clear by reference to the views of that distinguished exponent of the Emergent Theory, Prof. Lloyd Morgan. The task is rendered easier by the fact that Prof. Lloyd has subjected my views to very fair and friendly criticism in his article on "Biology" in *Evolution in the Light of Modern Knowledge* (1925).

Even many mechanists admit—if they have not fallen victims to the wiles of the strict Behaviourists—that their principles do not apply to psychological events. It becomes of the utmost importance then to determine just how far down in the scale

unmistakable traces of psychical activity appear. Prof. Lloyd Morgan, as I understand him, admits psychical activity as an effective factor as far down as "prospective" or "cognitive reference" can be found. Below this there is non-cognitive reference, which is little more than mere sensation and has no influence on events. And in any case he holds that the points of view of biology and psychology are quite distinct—that some activities of a living organism can be regarded (1) as physiological, and (2) as psychological. In physiological regard "the entire life of any organism consists of a series of responses to stimuli which reach it from various sources," and it is made quite clear that the response is determined "here" and "now" by the physical nature of the stimulus and the physical organisation of the organism. In psychological regard "the ruling concept is mental *reference* (for example in perception) on the part of that which experiences—say an organism as enminded—to that which is experienced, spoken of as the object of such experience."

The crucial question seems to be the interpretation of the stimulus-response relation. If we adopt Lloyd Morgan's physiological formulation of it we are, it seems, in the long run, forced back on mechanism. If on the other hand the observed facts enable us to adopt the psychological formulation, we are entitled to take this interpretation as justified, and by so doing we remove the organism's activity and the organism itself to a different plane of interpretation from the mechanistic. It is in this way—and so far as I can see, only in this way—that we can maintain that some activities of living things are irreducible to physical components. The distinctively biological point of view would thus be indistinguishable from the psychological, and the physiological formulation merely a half-way house to the mechanistic.

The important practical question then is to determine what classes of organic activity should be interpreted in terms of the

perception-response relation—these will be the irreducible characteristics—and what classes are sufficiently explained by the quite different stimulus-reaction principle; these will be reducible characteristics, or may legitimately be claimed by the mechanist as such. I hold with McDougall that organic activities which manifest the objective marks of purposive striving give evidence of Mind. Let me quote two passages from his paper on “Mental Evolution” in *Evolution in the Light of Modern Knowledge*, which seem to me to state this point of view with great clearness. “So far as we can in any sense grasp the function of mind it is essentially the function of guiding present action in relation to the course of events anticipated in the light of past experience. Mind is an active bridge or bond between the past and the future. The simplest conceivable mental function involves some awareness of the present, some memory of the past, and some anticipation of the future, however dim, vague and formless such awareness, such memory, and such anticipation may be. And wherever we observe the objective marks of purposive striving, there we have ground for the attribution of mental activity in this full sense” (p. 342). And again, “The fundamental mental function is cognition or awareness of some object, prompting to striving in relation to it. This function is absolutely unique; we cannot hope to explain it in terms of any other. It is one of the ultimate realities; we have to accept it as a datum not capable of explanation” (p. 343).

Now so far as the behaviour-life of animals is concerned, and perhaps also the responses of plants, I see no great difficulty in applying the psychological interpretation; the alternative mechanistic method of study, which tries to resolve behaviour into a complex of mechanically determined reflexes and tropisms, seems to me to miss what is essential in it. With regard to the other activities of living things—those shown in growth, differentiation, development and ordinary maintenance—it may

perhaps be said that a psychological interpretation would be fanciful. But are they fully interpretable except through concepts which attach themselves rather to the psychological or psychobiological formulation than to the mechanistic?

If in studying behaviour we admit that the organism has perceptions, however dim and confused they may be, that it acts with reference to a sensed environment which is private to it, that it strives to fulfil some purpose which is rooted in its nature, then we are ascribing to that organism individuality and continuity of experience which make it utterly different from any machine. Can we do without these concepts of individuality and continuance when we come to consider the "organic" activities of living things? I venture to doubt it. Many of these activities manifest the objective marks of Mind; they have meaning only in relation to the life of the organism as a whole; they are adjustable to changing circumstance. I do not see how these characteristics are to be explained on any machine-hypothesis, and the only alternative seems to be to admit the possibility that these activities also must be interpreted on the analogy—remote it may be—of behaviour-action.

This position is, I fully agree, a very debatable one, but I do not think it is so absurd as it appears at first sight.

Coming back to Prof. Lloyd Morgan's views, it will be seen that I differ from him in making the emergence of life synonymous with the emergence of mind. Though it appears, particularly from his latest book, *Life, Mind and Spirit* (1926), that he believes in the "unrestricted concomitance of life and mind," that there are no "bioses" without "psychoses," he does not allow mind to play any effective part until it has reached the level of "cognitive reference." I find it very difficult to grasp what he means by the lower form of mind, at the level where reference is non-cognitive, and I hazard the opinion, for what it is worth, that even in the lowest forms of behaviour, as manifested by a pro-

tozoon or a tissue cell, reference is both prospective and retrospective.

In conclusion, let me try to sum up my attitude to the theory of Emergent Vitalism. I am inclined to agree that it is an advance upon Biological Mechanism, inasmuch as it maintains that there are irreducible characteristics of living things. It does not, however, seem to lead to any new line of attack upon biological problems; it cannot prevent the mechanist from doing his best to reduce the presumed irreducible, and it cannot convince him logically of the hopelessness of his attempt. The laws which it might enunciate relating to the irreducible characteristics of living things would be to some extent tentative and provisional, being relative to the progress made by the mechanist in reducing them. The Emergent position would be more secure if it could be shown that certain vital characteristics could not receive an adequate interpretation within the limits of physical science at all—that is to say, if they could be shown to require a psychological interpretation. This appears to be the case, certainly with the behaviour-life of animals, and probably with other activities of living things.

With the emergence of Mind there is a definite gap formed, which is different in nature from the steps made in the progression from the electron to the atom, from the atom to the molecule, and generally from one material unit to another more complex. That at least is how the matter appears to me.

One further remark. I suggested in my book *The Study of Living Things*, a classification of organic phenomena into responses, functions and material conditions, and it is not without interest to point out that this classification bears a close relation to that worked out by Dr. Broad on logical grounds, to which reference has been made earlier in this paper. By "responses" I meant such activities as are manifested by the organism as a whole and must be interpreted from the psychobiological point

of view. These certainly fall into Dr. Broad's class of ultimate characteristics, and are the material for "Intra-ordinal" laws. "Functions" are essentially of the same nature as "responses" but are performed by parts of the whole. These also fall into the category of irreducible characteristics, though some of the simpler ones might be shown to fall into the class of reducible characteristics. Finally, under the name "conditions of existence" I included (1) the physico-chemical properties of living protoplasm and its products, (2) the positive environmental conditions of functioning, and (3) what may be called the negative conditions of functional activity, or the direct action of environment. These fall naturally into one or other of Dr. Broad's classes of "reducible characteristics" and "ordinally neutral properties," *i.e.*, properties shared with units of lower order. The proper field for Biological Mechanism appears to be the study of what I have called the material conditions of life.

II. *By* C. R. MORRIS.

IN its simplest form the theory of Emergence seems to be based upon an analysis of real processes. In certain real processes there seem to arise events which could not have been foretold, and there appear qualities which cannot be explained, in the sense that they cannot be seen to be necessitated by that which went before. These events were not *bound* to happen, the qualities were not *bound* to appear. They just did happen and did appear. and their occurrence must just be recognised and "accepted with filial piety."

This does not, of course, mean that such events and qualities are not a proper object for disciplined examination in the pursuit of knowledge. We may collect and compare instances; we may experiment and vary conditions in order to discover what conditions are in fact invariably present when these qualities are seen to come into being. But we can only conclude from this that, under those conditions, these qualities seem always to emerge in practice. We may never hope to see any necessary connexion; we shall never be able to satisfy ourselves that from our knowledge of the nature of the case this result and no other was bound to issue. Instances given are combination in chemistry and development and evolution in biology. In both of these cases, it is said, the inquirer must wait upon Nature; he cannot anticipate experience and foretell what will happen; nor, when it has happened, can he see that this and nothing else was bound to happen. He must just accept the fact that it has happened.

To the Mechanist this view appears mere scepticism; to him it seems to be nothing but a thinly disguised assertion of

the unintelligibility of the processes concerned ; to say that a quality is emergent is to say that you cannot deny that the quality is there, but that you do not see how it can be there. If ever it is said that a given quality has emerged, the Mechanist will accept this statement as a challenge to the mind to investigate the matter until it can be shown either that the particular quality was bound to appear under the given conditions, and nothing more, less or different, could have appeared, or that the quality could not have appeared under those conditions. The conclusion in the latter case would be, of course, that either the conditions were really other than they appeared to be, or that the quality did not emerge, and the observer was somehow deceived in thinking that it did. The Mechanist always seeks for explanation, meaning by this the discovery of a necessary connexion between conditions and result : for him the attempt to understand the world is the attempt to find such an explanation, and he who cannot offer such an explanation cannot be said to understand the facts he is considering. In this respect the peculiar nature of the particular facts can make no difference. Understanding is always understanding, of whatever kind be the facts which are to be understood. The mind is satisfied with one kind of explanation only. To say of any facts that they cannot be explained in this way is to say that they cannot be understood—that is, they are unintelligible. This means that if you assert that any group of facts cannot be explained mechanistically, you dub yourself a sceptic with regard to those facts. On this view, to say that a quality is emergent and to rest satisfied with this account, is fondly to cover a difficulty with a blessed word, and so to conceal from yourself the fact that the particular process is quite unintelligible to you.

To meet this charge, the advocate of Emergence must maintain that to describe a process in terms of emergence is to show that you understand the process : to say that a particular

quality emerges is to assert a simple, clear, and mentally satisfying account of the relation between the quality and its precedent conditions, so that no reasonable man can ask for more explanation than is contained in this. He must show that this assertion expresses not ignorance or confusion of mind, but knowledge of the process, and that to ask for more than this is (as Locke would say) to demand we know not what, and to show that we have a mind to be sceptics without being able to be so. The relation of emergence, it must be maintained, is as clearly and simply understood as, for instance, the conception of cause or of reciprocity or of any relation which can form the basis of mechanistic explanation. The theory of Emergence maintains that when we know under what conditions such and such qualities emerge, we have understood the processes involved, and there is nothing more to explain: to seek for more than this is vainly to attempt to answer one of those many questions which philosophy should never have asked. It would thus be due not to the fundamental nature of the mind or of reality, but to unreasonable prejudice, that we commonly accept as explanation nothing but mechanistic explanation, and refuse to allow that we understand any process until we can exhibit it as mechanical.

What evidence are we offered in support of these claims on behalf of Emergence? On what grounds are we asked to believe that to discover emergence is to explain real processes, or at least some real processes. Rightly regarded, we are told, the conception of emergence is as fundamentally intelligible as that of reciprocity or causation. But is it? Let us consider causation for a moment, and try to determine what is meant by saying that it is an intelligible relation. When we are told that A causes B, we are told something of which the meaning is quite clear to us. It may be true or it may be untrue, but it cannot well be an obscure account or an inadequate account of the particular relation between A and B which is being described. The meaning

of the phrase is quite clear, and all attention is at once turned to the attempt to discover whether or not it is true in fact. No attentive person could confuse the relation of cause and effect with any other relation. If in a case where A and B are in fact reciprocally related, I assert that A is the cause of B, my assertion is not obscure or inadequate: it is perfectly unambiguous and, of course, untrue. If, as the result of my assertion, an inquirer examines the relation between A and B, he will be trying to discover not what I mean by stating them to be causally related, but whether A and B are in fact so related—that is, whether or not my statement is true. Any argument or difference between us will have underlying it the recognition, on the part of both of us, that the causal conception is a perfectly clear, unequivocal conception, meaning the same to both of us, and that our whole difference concerns the facts. If I assert that A causes B, and an objector says that it does not, we know that we are taking different and contrary views of the facts, and that our disagreement is not one of terminology. We know that the ground of our difference is not further reducible by argument, but we must proceed to examine the facts, confident that one of us will be shown to be right and the other wrong. In this matter the honours cannot possibly be easy between us: one of us will have in the end to recognise that his assertion is just untrue.

It would seem to be because the conception is so certainly intelligible that the causal relation is universally accepted as a basis of explanation of fact. Assertions about causal relations are unequivocal and must be either just true or just false. If we explain a thing in terms of this relation, our explanation may be unsound; but, if it is not unsound, it is satisfying. Unless it is proved to be false, there is nothing else which the mind can ask or wish to know about those facts. Such explanation is final; it cannot be made simpler or clearer. It states relations so unequivocally, that we may fairly be confident of noticing any

untruth in the course of experience. This virtue seems to attach to the conception of reciprocity also.

How, we may now ask, does the conception of emergence stand in this regard? Have we any such clear notion of what is meant by the term? If we are told that, under such and such conditions X emerges, do we at once (after due attention to the meaning of the term) feel that this, if it were true, would be a perfectly satisfying account of the becoming of X? Or do we rather feel that what this assertion means is, that X appears to have come into existence, no one knows why or how? If the latter, to say that X emerges under such and such conditions is not really to add an ascertained truth to human knowledge, but rather to make a suggestion and put a problem. How do you know, we may ask, that X has emerged? How *can* you know, unless you can see that it necessarily must emerge—that is, unless you can detect a causal necessity?

It is admitted, of course, that such causal connexion cannot at present be detected in chemical combination and biological development. The question before us is this: if we confess to have relinquished all hope of finding such connexion, are we admitting that these processes cannot be explained or understood, or can we maintain that they can be satisfactorily explained in a different way, on the basis of a different relation? Are we confessing that reality is to this extent unintelligible? The theory of Emergence must at least maintain that, in asserting emergence, it is asserting an intelligible relation, and that a knowledge of emergent qualities, recognised as emergent, is a satisfying goal for human inquiry, in the sense in which a mechanistic explanation is satisfying. On this view some processes would be mechanical and some not mechanical, but both alike would be intelligible and clearly understood. When a quality was recognised to be emergent, it would be at once clear that its occurrence was not mechanically caused, and *vice versa*. Anyone

who asserted that a quality was emergent, and yet went on to try and discover what was the cause of its occurrence, would then be able to be shown that he did not understand his terms.

I must admit that, to put explanation in terms of emergence on a level with mechanical explanation in respect of their intelligibility appears to me fantastic. If I look into my mind for a clear notion of emergence, I fail to find it. If asked whether such and such a quality is emergent, I find myself asking, not whether in fact it is emergent or not, but what exactly could be meant by calling it emergent. I cannot convince myself that the term represents anything but an incomplete understanding of fact, recognised as incomplete. If this is fair, it would appear that the theory of Emergence is implicitly admitting that the processes under consideration are less intelligible than such processes as can by their nature be explained mechanically; and further that, if pressed, its advocates would have to admit that "less intelligible" in the end means just unintelligible. In other words, it is, as applied to biology, a confession that scientific inquiry into vital processes does not lead one to hope that such processes will ever be shown to be capable of any satisfying explanation, but that we must always regard them as a mystery. If the emergent theorist admits that any real processes can be explained mechanically, he must admit that, as compared with these, processes which must be described in terms of emergence are unintelligible. Yet, if any real process can be explained in terms of mechanics, the mind can surely never rest satisfied with anything less than a mechanical explanation of all real processes, since it must be admitted that mechanical explanation is intelligible and satisfying in a sense in which no other form of explanation can be. It would seem that, if the mind is to be satisfied with a recognition of emergence as an ideal for knowledge, the theory must be applied to all real processes, with the implication that mechanical explanation can only be attained in the case of arti-

ficial and hypothetical processes. The mechanistic theory would then hold only of ideal, reversible processes, and real processes would be recognised to be non-reversible and to that extent defiant of mechanistic explanation. In other words, it is only when it has been proved that no real process can be explained in terms of mechanics, that the theory of Emergence can be plausibly put forward to explain any real process. If this is so, it clearly cannot explain the distinction between vital and non-vital processes.



III. *By* SIR W. LESLIE MACKENZIE.

1. *The Genesis of the Term "Emergent."*—What is the meaning of the term "emergent"? What logical gap is it intended to bridge? What does the concept express that is not as well expressed in other terms? How has it come to invade recent discussions to the extent that one philosopher uses it to express his standpoint in a whole philosophy called "emergent evolution"; another philosopher analyzes it from various standpoints, puts it to searching logical tests, and uses it in connections like "emergent mentalism," "emergent materialism," "emergent neutralism," and so on; that American and Canadian philosophers are excited to acute controversy over the word, some of them questioning the whole doctrine of "levels," others rejecting that doctrine, and others, though friendly to the term emergent, very sceptical about its unrevealed implications? Obviously, like the term "event," which, in its Whitehead sense, has infected a multitude of discussions, the term emergent must be studied in detail if only to prevent ourselves from being emotionally biased by a word that seems mysterious, and "more than usual" solvent because it is unfamiliar.

Before, therefore, I make any comment on Dr. Russell's carefully worded criticisms, I should like to go back to Prof. Lloyd Morgan's two primary references, viz., Mill and Lewes. I had already gone to Bain on my own account and I found that he had dealt with the notion; but that, as usual, he had treated it with Aberdonian laconicism. If, from these sources, I repeat some of what is now familiar from Dr. Lloyd Morgan's and Dr. Broad's books and from others, it is because I find it the simplest approach

to the logic of the case. Its value as a working concept must be tested by the many points brought forward by Prof. Morgan, Dr. Broad and Prof. Alexander.

2. *Composition of Causes*.—Mill wrote: "This difference between the case in which the joint effect of causes is the sum of their separate effects, and the case in which it is heterogeneous to them; between laws which work together without alteration, and laws which, when called upon to work together, cease and give place to others; is one of the fundamental distinctions in nature." Where the joint effect is the sum of the separate effects, the case is one of "ordinary composition of causes." Where this is not so, Mill uses the term "heteropathic laws." But, after the well-known chemical illustration of elements and compounds, he adds: "Thus it appears that even heteropathic laws, such laws of combined agency as are not compounded of the laws of the separate agencies, are yet, at least in some cases, derived from them according to a fixed principle. There may, therefore, be laws of the generation of laws from others dissimilar to them; and, in chemistry, these undiscovered laws of the dependence of the properties of the compound on the properties of its elements may, together with the laws of the elements themselves, furnish the premises by which the science is perhaps destined one day to be rendered deductive." Bain writes: "Composition of causes is sometimes applied to chemical actions, so as to mean not a union of forces, but the union of substances or materials. In this way, oxygen and hydrogen combine to form water. This part of the chemical process comes under collocation, and not under force. The mixing of materials and the union of forces are not the same fact. In chemical action, thus understood, we cannot fully predict the characters of the compound from the characters of the elements. It is the speciality of chemical combination to merge nearly all the physical properties of the substances combined, and yield a new product

where the combining elements are not recognizable. Sulphur combines with copper to form a black flaky substance, the sulphuret of copper. There are still wanting laws that would serve us to compute the resultant of a chemical combination; we know only that weight is not lost, and that the law of defined properties holds." Here we have four points: non-predictability, merging of properties, new product, and the absence of laws relating the compound to the elements of which it is compounded. These are the main ideas gathered together under the term emergent. But the point is made more explicit by Lewes when he writes: "There are two classes of effects markedly distinguishable as resultants and emergents. Thus, although each effect is the resultant of its components, the product of its factors, we cannot always trace the steps of the process, so as to see in the product the mode of operation of each factor. In this latter case, I propose to call the effect an 'emergent.' It arises out of the combined agencies, but in a form which does not display the agents in action." Then he expresses variously the difference between the two classes of effects. He further writes: "Add heat to heat, and there is a measurable resultant; but add heat to different substances, and you get various effects, qualitatively unlike: expansion of one, liquefaction of a second, crystallization of a third, decomposition of a fourth, and, when the sensitive nerves of the skin are acted on, the effect is still more dissimilar. Here we have various emergents simply because in each case there has been a different co-operant; and in most of these cases we are unable to trace the process of coalescence. The emergent is unlike its components in so far as these are incommensurable, and it cannot be reduced either to their sum or their difference. But, on the other hand, it is like its components or, more strictly speaking, it is these: nothing can be more like the coalescence of the components than the emergence which is their coalescence. Unlike as water is to oxygen or hydrogen separately, or to both

when uncombined, nothing can be more like water than their combination, which is water. We may be ignorant of the process which each passes through in quitting the gaseous to assume the watery state, but we know with absolute certainty that the water has emerged from this process. To fill up this gap in our knowledge by the word 'power' or 'causal link' is illusory. Some day, perhaps, we shall be able to express the unseen process in a mathematical formula; till then we must regard water as an emergent." One further quotation from Lewes: "Were all effects simply resultants in the sense here specified, our deductive power would be almost absolute; a mathematical expression would include all phenomena. It is precisely because effects are mostly emergents that Deduction is insecure and Experience is requisite to confirm even the most plausible deductions."

It is clear that Lewes regarded an emergent as simply an effect where the process of the combination of the causes was real, but not capable of being followed continuously through all its steps. If we are to keep Lewes's meaning of emergent, then all that is implied in emergence at various levels—matter, life, mind—would be simply that these various emergents are effects of lower-level causes the steps of which are real but cannot as yet be explicitly traced. Whether this is what Prof. Alexander means by the term in his description of the various levels or what Prof. Lloyd Morgan means by his various emergents at the stages of evolution, I cannot tell. But, in reading them both, I have the feeling that, at least occasionally, they mean something different and something more. It is, however, certain that Lewes used the term to signify an effect as yet non-predictable but not, therefore, incapable itself of being ultimately so related to its contributory causes that prediction might become possible.

3. *Non-predictability or Non-deducibility.*—Mill, Bain and Lewes all comment on the non-predictability. Bain qualifies his statement by: "We cannot fully predict the characters of a

compound from the characters of the elements." Certain of the characters, weight for instance, we can predict. But I have difficulty in seeing why the later expositors of the idea put so much emphasis on predictability. It is true that Dr. Lloyd Morgan recognises that certain compounds can be predicted from the elements, and the predictables he would call, like Lewes, resultants; the non-predictables, he would call emergents. It seems to me that Mill, Bain and Lewes regarded non-predictability simply as due to the temporary absence of laws relating the properties of the elements to the properties of the compound. Whenever these laws or formulæ can be established, predictability from elements to compound will be as simple as the prediction of weight. Is anything more than this absence of an adequate formula implied? Is it suggested that, in the nature of the compound, there is something that never can be correlated under a formula wide enough to include the properties of the elements as well as the properties of the compound? Is it absolutely absurd to hold that water may ultimately be analysed in such a way as to reveal all the steps through which hydrogen and oxygen pass from the gaseous to the liquid state? If that process can be revealed, non-predictability will disappear. It is only, as it were, a temporary disability. In the simpler chemical cases, there does not seem to me anything essentially absurd in the suggestion that, by analysis, we may discover every step of the process from two gases to water and so succeed in revealing what particular processes within those gases make it possible for them to become water.

In commenting on the oxygen and hydrogen case, Dr. Broad says: "Here we have a clear instance of a case where, so far as we can tell, the properties of a whole composed of two constituents could not have been predicted from a knowledge of the properties of these constituents taken separately, or from this combined with a knowledge of the properties of other wholes which contain

these constituents." Dr. Broad, while showing that it is "not particularly rash to expect to predict the dynamical behaviour of any material complex under the action of any set of forces," says that "the law connecting the properties of silver-chloride with those of silver and chlorine and with the structure of the compound is, so far as we know, a *unique* and *ultimate* law." He explains precisely what he means by "unique" and "ultimate." But the oxygen and hydrogen case he qualifies by "so far as we can tell" and the silver-chloride case by "so far as we know." He points out that there is always the possibility of elements showing unpredictable properties when put into new situations and that "this happens whenever a chemical compound is prepared or discovered for the first time." It is also, of course, the case that neither oxygen nor hydrogen was "predicted"; they were discovered by experience and experiment. This is true of all "elements." What I cannot fully understand is why this type of everyday non-predictability counts for so much in the discussion. What depends upon it? Is it the question of novelty? Is it important that the "synthesis" at the various stages of evolution should be a "new synthesis" or a "creative synthesis"? Are the terms "emergent" and "creative synthesis" to be taken as equivalent? Dr. Lloyd Morgan (*Mind*, vol. XXXIV, No. 133) concedes the point about predictability; but he says: "Genuinely new qualities either spring into being with emergence, under what Mill called 'heteropathic laws' or they do not." What seems, therefore, to be important is not the mere non-predictability, but the novelty.

4. *Novelty*.—This raises the question: In what sense is any substance new? Is water new when we know that everything it contains was contained in oxygen and hydrogen? (I assume that this is physically correct, although it may look like begging the question.) Is silver-chloride new when we know that it contains nothing but silver and chlorine in relations as yet

undiscovered? Is everything that happens from instant to instant, or, perhaps, I should say, is every event (Whitehead) new? Does this mean new in the minimal sense that the latest event is necessarily later than the one before it, if there is one before it? Or is this whole conception of novelty a mere pragmatic suggestion to ground a theory of cosmic evolution? Further, is this whole world of nature to be treated in the "realistic" sense as showing novelty at every stage for itself? Or are we to fall back on the epistemological position and regard "new" as merely a logical formula of the contemplating mind? I have jumbled up all these questions together, simply because I seem to see the idea of novelty flitting about through all the discussions and suggesting something that is nowhere made precise or graspable. At any rate, this is quite clear: Prof. Lloyd Morgan prefers the word emergent to creative synthesis; but the content of both notions seems, in his writing, to be nearly the same. Perhaps I do him injustice. Certainly of the two terms I should prefer the relatively simple emergent to the extraordinarily complicated crowd of ideas gathered in "creative synthesis." If "creative" means making things out of nothing, which is one alleged meaning of creation, I should discard the word simply because of its irrelevant emotional associations. A new compound formed out of known elements does not seem to me well described when it is called a "creative synthesis." Why not, as Prof. J. Arthur Thomson suggests, simply "chemical combination"? Is the novelty of every such combination important for a philosophy of any kind? Is chemical combination a "creative" process?

5. *Application in Biology.*—We might pursue further the chemical illustration; but it is important only as an instance. What is more important is how the term emergent is used in biology. (For the chief points in this paragraph I am indebted to Prof. Arthur Thomson, but he is not responsible for my use of them.) Prof. Lloyd Morgan applies the term along the whole

line of evolution. If we are to regard as emergent everything that has an analogy to the production of water from oxygen and hydrogen, we may say broadly that every class of animals emerges ; insects, birds, man. We could also say that the endocrinal system emerges. But in the case of water, as Dr. Broad points out, the result is no doubt "determined" by the antecedent properties of oxygen and hydrogen brought into a certain relation. This is consistent with Lewes's meaning of emergent. Are we to retain the same meaning of the word when we say that birds emerge, say from reptiles, or that man emerges, say, from some form related to the ape ? In saying that these are emergents, are we saying that they are due to lower-level causes whose process we do not yet know (which would be the Lewes meaning), or that we are to accept the emerging species simply as a fact without considering how it is related to the lower level from which it emerges ? The first meaning is definite and intelligible ; the second meaning implies a suspension of judgment. If the first is the real meaning, the term should be defined as Lewes defines it ; if the second is the real meaning, then it seems to me that the term itself is merely a provisional mask for undeclared or undeciphered causation. The purpose of biological analysis, I presume, is to show, in any given case, the continuity in evolution. Such continuity is not inconsistent with either "slides" or "jumps." But once continuity is indicated as either actual or probable, the need for terms like emergent ceases. As Mr. Harold Chapman Brown points out (*Journ. of Phil.*, Vol. 23, No. 5, p. 120) : "The point is that *how* these things happen can only be answered in scientific fashion by tracing the steps through which they regularly come about and correlating the result with processes on simpler levels." In any given change, whether it is secured by a summation of minute changes or by a mutation, the result may be a qualitative change as in the production of water. But this fact does not supersede the need for inquiry

into the causative antecedents. But when we call these changes emergent, we seem to assume that nothing further is necessary. But surely it is still necessary to inquire into the detailed steps of the new production and to do relatively for biological changes what the chemical analysis of water does for the chemical changes. It may well be that, with our present methods, little can come of the biological analysis; but the need for analysis is not superseded by accepting the fact that the process through which a new quality emerges in an organism is unknown. But that is what we are saying, at least provisionally, when we speak of a new mutation as emergent. I assume that the mutation is a positive mutation, so as not to raise any question about degenerations (negative mutations).

To take the broader case, viz., living matter emerging from non-living matter. Dr. Broad analyzes the varieties in which the emergence of life and mind may be studied. I am not competent to follow him in his extraordinarily fascinating discussion; but when he applies the term emergent in the case, say, of emergent materialism, does he use the word in the same sense as he uses it in describing water or silver-chloride, viz., in the sense that life is an effect of conditions in non-living matter where, however, the precise steps of the transit cannot be traced? To take an instance of his use of the term: "What I am not certain about is whether he (Mr. Bertrand Russell) regards mentality as an emergent characteristic or as an irreducible characteristic" (*The Mind and Its Place in Nature*, p. 650). Does "emergent characteristic" mean a characteristic due to the previous conditions but not yet reducible to terms of a lower level? Or to take another example which is perhaps easier to understand: "If the existence of the so-called 'secondary qualities' or the fact of their appearance depends on the microscopic movements and arrangements of material particles which do not have these qualities themselves, then the laws of this dependence are cer-

tainly of the emergent type" (p. 72). Here the use of the word seems strictly analogous to the Lewes use in chemistry. So far as I can judge this is one of the very best illustrations of the need of a term like emergent. But it does not here exclude the tracing after the fact of the steps through which the effect, say, of ammonia on the nostrils, could, conceivably, be brought within some formula wide enough to include both the microscopic structure and the "secondary quality" effect.

To go back for a moment to the biological instance: one can see that the startlingly great mutations resulting in the appearance of, every great faculty may well demand a word such as to restrain our readiness to assign a cause or causes. And it may very well be that when we come to mind, our formulæ may be too crude to enable us to do more than suggest rough approximations, and we may prefer to call mind emergent merely because we do not know what else it can be. But surely this does not prevent us from looking for laws on the psychological level and for searching for some liaison between them and the laws of the pre-psychological levels. When we are told that such a quest is absurd, I prefer to believe that there is a misunderstanding of terms somewhere. If the provisional term emergent keeps questions like these open, I should certainly favour this or some equivalent word. Up to this point there seems little difficulty in tracing the continuity of meaning in the term.

6. *Regression versus Evolution.*—Evolution is one concept and emergence is another; but the conditions emerging, say, in Hunt Morgan's Mendelian experiments, may, even if they are degenerations, be regarded as emergent. Are we to apply the term both ways? Or must we look on constant degenerations as mere negatives of pre-existing states and, therefore, not new, or are we to take them as new? In that case, does the term "creative synthesis," or its equivalent, apply to the innumerable

degenerations that are just as unpredictable as the positive mutations? If the term is to be applied as widely as this, it seems to me to run the danger of losing all specificity.

Once more, if the term emergent is merely a convenient provisional term to enable a philosophical theory to be made into a better fit for unresolved facts, there is, so far as I can see, no logical ground for objecting to it; but it is apt to fall into a use as mechanical as Spencer's formula of evolution.

So far I have tried to trace a meaning of the word without regard to the merits of the cases in which it is applied.

7. *Dr. Russell's View.*—Dr. Russell says: "The fundamental assumption of the 'Emergent Vitalist' appears to be the same as that made by the Mechanist—that the activities of the living thing are completely determined by its physical and chemical constituents in the particular arrangement which characterises living bodies." But I should not regard it as a defect of the emergent theory that "in practice there seems to be little difference between the two views." I have tried to discover whether in the phrase "emergent vitalist" the word emergent retains the same significance as in the silver-chloride case, and I assume that, in Dr. Broad's exposition, it does. Dr. Russell further says that "the real ground for the uniqueness of certain vital characteristics, their irreducibility to simpler components, lies in the fact that mind comes into play in all distinctively vital functions." But I do not see clearly how the concentration on a psychological interpretation supersedes the necessity for pressing the mechanics of the organism to the utmost limit. If we assume the psychological interpretation as alone having an ultimate meaning, what relation will the physics and chemistry of the living organism have to our interpretation in terms of mind? "The emergent position," Dr. Russell says, "would be more secure if it could be shown that certain vital characteristics could not receive an adequate interpretation within the limits of physical science at all—that is to

say, if they could be shown to require a psychological interpretation. . . . With the emergence of mind there is a definite gap formed." But in that case what meaning are we to give to the term emergence? If the psychological standpoint is to transfigure the whole problem, how can we really speak of emergence of mind at all? I can understand the relevance of the term as Dr. Broad uses it; but I cannot understand its relevance as Dr. Russell uses it. If by emergence he is still to mean the same thing as Lewes meant and as Prof. Lloyd Morgan means in some of his illustrations, if not indeed in all of them, I cannot see how, consistently with this standpoint, he can use this term about mind at all. He says that the gap is "different in nature from the steps made in the progression from the electron to the atom, from the atom to the molecule and generally from one material unit to another more complex." But if this step is "different in nature," this seems to me to mean that we cannot any longer speak of mind as a possible object in the sense that Dr. Broad seems to use it or even in the sense that Dr. Lloyd Morgan stands for, viz., complete concomitance throughout nature. This seems to me like falling back on the epistemological problem and that, of course, means the end of the dispute; for all the laws emergent or other, are only provisional categories within the field of knowledge. But, as I have said on previous occasions, no matter what view we take of the subject-object relation, whether we be realists or idealists, the laws of the object in all its phases have to be completely formulated: if we are realists these laws have to be formulated for an object-world independent of a knowing subject; if we are idealists in one sense or another, the laws of the object-world must be formulated *as if* the object-world were independent. From the scientific standpoint, both realists and idealists have the same exact matter to deal with, neither more nor less. This I gather is what Dr. Lloyd Morgan aims at in his use of the term emergent

as a provisional formula. The success or unsuccess of his attempt, I do not try to estimate ; for here we are concerned with the meaning of the term. But I should like Dr. Russell to elaborate his standpoint a little more on the psychological side. Probably I have mis-stated his position. Does he accept Dr. Lloyd Morgan's "concomitance," or does he maintain a form of "mentalism," or how does he formulate the relation of mind to organism ?

8. *Conclusion.*—The temptation to plunge into the depths of Dr. Broad's, Prof. Alexander's or Prof. Morgan's "philosophy" is very great ; but I should only lose my way. I have tried merely to seize a clear meaning for the term emergent. If it can be kept to that meaning, I can see a provisional use for the term ; but I have the uncomfortable feeling that it is used and it is going to be used as a term to suggest much more than it can properly mean. On the whole, it seems to me that the best use of the term is to name provisionally cases where causation is accepted as a fact, but where the steps of their production are not yet capable of scientific description. If this be taken as the basic meaning, there seems to be no inconsistency between it and the use of the term made by Dr. Broad when he speaks of differentiating attributes, irreducibility, emergent materialism, etc.

III.—SYMPOSIUM: THE VALIDITY OF THE BELIEF IN A PERSONAL GOD.

By J. L. STOCKS, C. D. BROAD *and* W. G. DE BURGH.

I. *By* J. L. STOCKS.

“The gods, as man conceives the gods, live upon spiritual food; but, viewed in the light of history, they appear as beings who must earn their bread by supplying, in their turn, the equally spiritual sustenance which their worshippers need. And unless they thus earn their bread, the gods die; and the holy places that have known them, know them no more for ever.”

Josiah Royce.

A.

THERE are two statements made by Mr. Alexander, in his treatment of this question in *Space, Time and Deity*, which I shall take the liberty of quoting at the outset. They state, I think, two cardinal points, which, with slight variations of form and emphasis, have been recognized in substance by nearly all philosophers who have trodden this ground recently, and which must always be kept in view if the problem is to be treated with any success.

“Primarily God must be defined as the object of the religious emotion or of worship. He is correlative to that emotion or sentiment, as food is correlative to appetite. What we worship, that is God.” (*S.T.D.* ii, 341.)

“The religious appetite or emotion depends upon the whole make-up or constitution of the mind and body, and is the response of it to the whole of reality. . . . The whole world . . . stirs

in us from the depths of our nature a vague endeavour or desire which shadows forth its object." (*Ib.* 377.) (The parts omitted in the second quotation are omitted because they involve Mr. Alexander's special view of deity as the awful prevision of Time's next birth.)

The two cardinal points then are these. First, that God is primarily to be defined as the object of the religious act or attitude. These alternatives are substituted deliberately for "emotion or sentiment," because those words seem to me to presuppose a certain answer to a question as to the nature of the religious experience, which it might be profitable on another occasion to discuss and which anyhow should not be prejudged. The words substituted are intended to leave this question open. Secondly, that in this act or attitude the whole man is in response and relation to the world as a whole. I have retained both parts of this assertion, although I am not quite sure of the meaning and importance of the first part of it, the wholeness of the man. All first-grade activity would seem to claim in a real sense the whole man; and that is one reason why I should have taken exception to the words "emotion or sentiment" above. But in any case for me the emphasis is on the second part; and it would be enough to say that in the religious act man is responding to the world as a whole.

If both principles are accepted and kept in mind, it follows that a philosophical treatment of the nature of God will be a philosophy of religion, just as a philosophical treatment of the moral good is necessarily a philosophy of conduct. Religion and conduct stand in each case for the place in which the relevant data are to be found. But obviously many philosophers have discussed the nature of God in no very close relation to the religious experience. Descartes, for example, and his contemporaries would perhaps have rejected the first of these two points altogether: certainly they appear to have attended only to the

second. While speaking of God, and claiming implicitly by their use of that term some close relation to the religious consciousness, they seem in fact to have sought for something indisputable that they could say about the world as a whole (as, that it exists) and to have relied for the rest on the associations of the word God. No doubt they had when they wrote reasons for reticence on the subject of religion ; but these do not justify for us a procedure which would only be valid if the religious experience were the sole avenue to knowledge of the world as a whole. If there is no other attitude in which man can catch an echo of the music of the spheres, then metaphysics and the philosophy of religion are identical, and the subject of all metaphysical assertions is God. Accordingly, it is now generally agreed that the task of philosophy is to expound the nature of the object of worship as a constituent of the real revealed in human experience as a whole.

The evidence of the existence of such an object is to be found in the religious act itself. In this respect religion is not peculiar. Mr. Alexander, in a passage quoted above, offers the parallel of food and appetite. "Appetite," it seems, in his use is equivalent to the ability to eat with success ; and, taking it in this sense, it seems clear that there would and could be no food if there were no appetite ; for food is anything that is successfully eaten. Another parallel is poetry, and works of art generally. The proof of the existence of poetry is in the poetical act, performed by the maker or reader or hearer of the poem. And there are in fact in this world many people who, if they were sufficiently honest and clear-headed, would deny the existence of poetry as well as the existence of God, and on the same grounds, viz., because of the absence or extreme poverty of the appropriate activity in their personal experience. The fact that they saw persons all round them whose lives and actions were obviously affected by experiences which they called reading poetry or communing with God, would not of itself invalidate the denial.

These persons might be the victims of auto-suggestion or of one of those other forms of delusion for which psychology finds such delightful labels. In the abstract, therefore, both denials are perfectly in order. We have to admit that human experience is so infected with prejudice and illusion that no experience can be taken at its face value, for what it claims to be. But, of course, if the religious experience is illusory, there is no philosophy of religion; and therefore for the purpose of this paper, I assume that it is not, and that the problem is to define the nature of an object the existence of which is guaranteed by the appropriate *i.e.*, by the religious, experience.

There is another point arising from these parallels which deserves a moment's attention. Though it is true that food is discoverable only by appetite and poetry only by poetic appreciation, yet in each case there is an identifiable physical object, part of the public world of things, which serves as the vehicle of these values, and its existence is never for a moment in doubt. Scientific exploration of this object is possible and might conceivably be able to show by sufficiently accurate analysis—even in the absence of appetite or poetic feeling in the enquirer—on what elements in the physical structure the functions performed depend. Science might thus succeed in accounting for an activity of which the scientist had no direct experience. But in the case of religion such external confirmation is out of the question. If the religious experience expressed itself as the affirmation of the existence of a class of events due to direct Divine intervention and not otherwise explicable, a problem would no doubt be created for science. But it must be observed (1) that it is difficult to see how the religious act could warrant the all-important negative element, inexplicability by the laws of nature; and (2) that such an affirmation would not be parallel to the cases cited, for neither eating nor poetic appreciation involve any breach of the laws of nature. The nutritive and

poetic values are superimposed, not substituted ; and therefore the " miracle " of crude popular belief offers no parallel. If, on the other hand, there were some definite type of existent or event, perfectly explicable on natural grounds, like going to Church on Sunday, with which the religious activity was uniquely associated, the parallel might hold. But there is no such existent or event. True, Churches are specifically religious buildings, and certain types of exercise peculiar to religion are commonly there performed : further, these things do no doubt throw some light on the nature and aims of religion. But however highly these may be valued by the religious spirit, they are valued as ministerial merely. That which they help to reveal is revealed also, we are told, in other ways innumerable ; and the whole of nature may be described as a " language or discourse " (in Berkeley's phrase) addressed by God to his creatures. Religion offers, we may say, adopting this metaphor, a certain reading of the world as a whole, of the experienced real as sense and thought enable man to experience it, of this without addition or subtraction, the religious truth emerging in the religious act as the vision of the ordering principle of the whole.

B.

What man then, as religious, asks of himself as a philosopher is, first, that in any account he may give of the human spirit he shall make room for the religious activity and reveal its significance, and, secondly, that in any account he may give of the world as a whole he shall similarly include and expound that feature of Deity which is revealed in the religious activity and in it alone.

But the bridge between the religious and the philosophical attitude is not easily found. Mystics have always complained of the impossibility of describing the goal to which the mystic way has brought them : *hoc intelligere quis hominum dabit*

homini? But their difficulty is only the extreme case of a difficulty which confronts religion of all kinds. In myths and creeds and prayers, at all times and in all languages, religion has been ready and eager to commit itself to statements historical and speculative as to the nature of things, which are not formally differentiated in any way from the statements of philosophers and historians. Such statements have been fantastic and absurd, and have come into violent conflict at times with enlightened contemporary opinion. The Hellenistic world, for example, seems to have offered to philosophically minded persons the two main alternatives of an allegorical interpretation and a total rejection which involved a rejection of religion itself. And in a certain sense it might be maintained that the philosopher has always to choose between these two alternatives. The statements which religious associations authoritatively issue in their liturgies, and patronize less officially in their accredited theologies, vary very widely in their relation to the religious activity to which they have reference. It is not to be supposed, for example, that the historical statements made in the Gospels as to the birth and life of Jesus Christ have their evidence solely in the religious activity of those who wrote and those who read the Gospels. On the other hand, the opening statement of *Genesis*: "in the beginning God created the heaven and the earth," may well be thought, in spite of its historical form, to rest entirely upon such evidence.

It is in statements of the second class that philosophy is primarily interested, because it is these that offer the obvious bridge from religion to philosophy. But their status is not easily determined. The Christian Church has clung very tenaciously to certain formulations of the nature of God, using extreme severity against such as proposed to vary them; and from such facts it would be natural to conclude that in certain fundamental articles of, let us say, the Nicene Creed we had before us the

authentic expression of the religious activity. We might suppose, I mean, that a properly equipped reader would find religion there, as he finds poetry in *The Tempest*. Yet, if one considers the lives of religious people and the nature of the religious activity, it seems evident that Creeds, even their fundamental articles, and even in the religious attitude itself, are not taken as final and essential. The historical process by which the formula now in use was arrived at would probably corroborate this, if corroboration were needed ; and the very possibility of successful enforcement of a single common formula over so many centuries might be held, in this world of change, to be a proof that the statements have not for the religious mind the cardinal importance which they seem to claim. A creed, we must suppose, whatever else it may be, is at least this, an attempt to set forth in outline the nature of that of which the religious act gives assurance ; and such an attempt must involve, not perhaps a surrender of the specifically religious attitude, but certainly at least an expansion of it which brings it into possible conflict with the results of experience in other fields. Even if the phrases of the creed stood to the religious mind for final and absolute certainties, yet the paramount claim of the unity of things would not allow the philosopher to accept them as such. He would therefore see before him in a sense the same alternatives which presented themselves to his Greek predecessor, and hold himself free to remodel and reinterpret.

So philosophy has to build its own bridge. And this only brings us to the fundamental truth about philosophy which was stated long ago, that it must take nothing for granted. There is no statement, either of "common sense" or of science or of history, which it can incorporate as it stands, unexamined, in its tentative divination of reality. Thus here again religion is not peculiar. But the case of religion is peculiar in this, that many of its characteristic statements look like philosophical statements

(while those of science and history do not), and therefore seem to be directly slighted or contradicted in the philosophical restatement. This is, of course, because they necessarily deal, as I have already said, with the world as a whole.

C.

After what has been said, it should at least be clear, if nothing else is, that a request addressed to a philosopher to pronounce in philosophical terms on the question whether a personal God is a necessary or allowable feature in a *Weltanschauung*, is an invitation to an ill-defined and highly precarious adventure. For the definition of the terms used, which are not primarily philosophical terms, he cannot but look beyond the question to the religious act and experience on which the question is based; and when he looks there, he may well feel that the question is essentially insignificant or misleading. The "personality of God" is no doubt a phrase generally accepted as indicating a central feature in the beliefs of modern Christians, but in their creeds and theologies it stands not isolated but united with much else; and it may be doubted whether it can be profitably discussed without the whole context of Christian dogma to which it properly belongs. However difficult it may be to accept such a body of dogma as the final and only authentic expression of the religious spirit, it is yet clearly better to rely on that than to accept more or less hasty and popular excerpts from it made by persons only distantly and indirectly interested. But having said this, we can only accept the fact that an examination of Christian theology is out of the question and proceed (*λογικῶς*, not *φυσικῶς*) to face the phrase isolated for our inspection.

Since men are the only persons recognized by common sense it seems clear that to call God a person is to conceive God after the analogy of man. And accordingly it is common to call the

popular conception of God the conception of a "magnified man"; and the jest is an old one that man has made God in his own image. But this personal God is at the same time asserted to be eternal, infinite, omnipresent, and so on, in a fashion strikingly contradictory to the nature of personality as we meet it on this earth. In fact, the first, and to most men the most obvious, difficulty in the conception of a personal God arises, not from a conflict between religion and philosophy, but within the religious world itself, from the apparent self-contradictions involved in the traditional descriptions of the divine nature. Perhaps "contradictions" is too strong a term; but personality is asserted, and with it are asserted not less emphatically attributes which may seem to deprive it of most of its meaning. An omnipresent, eternal, infinite being may be said to be active in ways in which men are active, to think, to plan, to will, to love; but these activities in him cannot be what they are in us, with our before and after, our felt limits and fretting obstacles. It is evident that there must lie in the implications of the term "personal" some element of special importance to religious thought which the serious qualifications introduced by these other attributions are thought to leave unaffected or even enhance.

It is natural to suppose that the root of this is to be found in some feature of the religious act itself; and the slightest acquaintance with religious literature gives immediate confirmation. To put the matter baldly and in its lowest terms: God is the object of worship, and the religious act is an act of worship. This act stands on its own ground, and is not shaken by anything that we can say. But those who are active in this way are not satisfied by a theoretical statement, purporting to do justice to their activity, which does not recognize that in the act the worshipper finds himself in some sense answered. A denial of God he can understand: but a recognition of God, which does not recognize this response, which is satisfied to regard the religious act as the

mere outpouring of the finite into the infinite, seems to him a deceitful evasion of the issue.

It would be too much to say that no term other than "personal" will serve to represent the attribute implied in this relation. I have already emphasized the doubtful status of all attempted formulations of religious truth; and in fact the word "personal" is usually introduced by religious thinkers with some apology. Westcott, it is true, says of Christianity that it "assumes as its foundation the existence of an infinite personal God and a finite human will. This antithesis is assumed and not proved. No arguments can establish it. It is a primary intuition and not a deduction." In this statement there is no hint of any obscurity in the attribution of personality, unless the qualification "infinite" is thought to include such a hint; but the dual description of the belief as at once an assumption and a primary intuition might well arouse suspicion. For myself, I doubt whether either description is correct. But in any case most modern religious writers speak, when the context is theoretical, much less positively. They may point out, for instance, after Mr. Clement Webb, that if the notion of person is taken quite abstractly, with no special reference to religious experience as we know it, not only the Gods of Greek Mythology, but the God of Aristotle, moving nature and the heavens as the object of their desire, and the God of Epicurus, blessed and indestructible and troubling neither himself nor any other thing, may well seem more personal than the God of Christian thought, the maker of Heaven and Earth, in whom we live and move and have our being. They also commonly admit that an account of the Being of God which refuses to rest in the mere *omnitudo realitatis*, and is not satisfied with negations, will necessarily fall into metaphorical and figurative language. To use metaphor is, no doubt, to use analogy where analogy will not hold (for there is no ratio, as Aristotle used to say, between infinite and finite); but we are here faced

with the inexorable limits of relational thought, and the only alternative is silence.

When God is said to be a person, then, it is not to be supposed that any of the features recognized in human personalities are quite literally ascribed to God ; nor is it sufficient to ascribe to God features the same in kind but indefinitely extended in range and power ; omnipresence and eternity are not to be reached by any extension of the human power to be in one place at one time and to continue living for seventy or eighty years. It is, however, to be supposed that the term has some meaning. And so, on the basis of the religious experience above described as that of a response to worship, a defence of the term personal may be offered which starts from religion and attempts eventually to come to terms with metaphysics.

The experience of response to worship may be said to give the religious spirit assurance that the world in its ultimate and overruling character is not unfriendly to man and his purposes. To astronomy man may be a speck, to evolution an incident, to physics and chemistry mere matter in motion. To all these man and his purposes are indifferent or insignificant, and the whole which they envisage (if it deserves to be called a whole) is a material self-sufficient system in which truth and goodness and beauty, and even life or spirit itself, count, as such, for nothing. But if in religion man is in response and relation to the world as a whole, and if that response is not spent in the void, but is itself answered, then there is evidence that the world does not disown man's efforts and achievements, but gives them a status in their own right, however humble that status may be, in the ultimate reality. And if it is asked what is the supposed range of the endorsement, so to speak, which human activities are to receive in and through religion, the answer seems to be that it has no limits other than such as man himself sets upon it. What has a merely conditional and tem-

porary value for man cannot be supposed to acquire intrinsic value *sub specie aeternitatis*; but apart from that there are no limits. The religious, like the artistic, spirit regards itself not as excluding or superseding other activities, but rather as presupposing and focusing them; and thus the scientific faith (of which science itself has no vision) and the philosophic venture, together with the moral effort, and all else in which man really claims to find himself, become partners in the assurance which religion offers, that the world in its inmost nature is not indifferent to the things man cares for.

But man's real interests are one and all spiritual interests. To be active in a mental or spiritual way is to have these interests and prosecute them. This is not to deny that body is involved, nor is it to assert anything as to the relation of body to spirit; we may, however, add that within our experience things which are active spiritually appear to be bodies and differentiated as bodies from things not spiritually active. Things which are active spiritually are credited according to the degree and energy of their spiritual activity with personality, and things which are not so active remain mere things. If now we are to use these terms spirit and body at all in attempting to characterize the contribution to reality made by the religious experience—and it is hard to see how they can be wholly dispensed with—it seems impossible to describe the reality revealed in that experience, or postulated in the reflection which arises from it, as other than a spiritual reality. This will not mean that it is no more than man is at his best, or that its bounds are set by the circle of human interests; only that it is *at least* that, and *at least* so wide in range. And if so, then it may be described as *at least* personal. "God is a spirit." "But surely," it may be said, "the indefinite article should be removed: for being infinite he cannot but be all the spirit there is, and must include all spirits in his being." The necessity of the inference may be doubted;

but in any case the article seems to be required. How spirits exist we know to some extent: but how spirit could exist, enfolding within it the host of finite spirits and yet infinitely surpassing them, this we can hardly guess. Besides, it is with the religious claim that we are concerned, and this is, not that men are gods, nor that they are (in the old phrase) fragments of the divine, but that the world is an order in which man's spiritual interests are recognized and securely established; and this can only be, it seems, if God is a spirit, a person, infinite perhaps, but responsive to man's worship.

All this, of course, is interpretation, and, as such, highly questionable. At most it is only a description of a possible line of advance from religion to philosophy, offering a possible interpretation (unsatisfactory, no doubt, to many) of the demand for a personal God.

D.

Many thinkers have exerted themselves, especially in recent times, to construct a metaphysical system which shall do justice to such demands as these, advanced by or for the religious consciousness, without dishonouring claims regarded by the thought of the day as equally, or even more, imperative. It is not part of my task, as I understand it, to attempt a review of such systems or to sketch one of my own. In view of the strictly limited competence of the human mind in the field of metaphysical construction, it would be a bold man who would deny any so-called fact on the strength of the inability of metaphysics to digest it. What is a valid belief except something with which metaphysics must reckon in the account it seeks to render of reality? In this sense it seems evident that the belief in a personal God is as valid as the belief in Space and Time and Matter, or in the chairs and tables of the "external world." Or, if that seems to beg the question and evade the issue, we might

follow Kant and put it rather thus, that in this region a certain agnosticism befits us: we cannot directly substantiate this belief by argument, but we do not therefore decline the intellectual test; we apply it in the only form available, by declaring our readiness to meet and examine and refute any argument purporting to demonstrate its invalidity. We claim, in short, that the *onus probandi* is on those who maintain the negative.

But, however legitimate such a position may be, it would nevertheless be somewhat ungracious to narrow the issue quite to this extent. Therefore I will conclude by suggesting—I lay no more emphasis than that on what I am about to say—two elementary conditions which I think will have to be fulfilled by any metaphysic which is to honour the religious demand in a form not markedly distasteful to the religious spirit.

Such a metaphysic must be (I will not say an idealist but rather) a *spiritualist* system. It must interpret body in terms of spirit rather than spirit in terms of body. The spiritual life cannot be, what it appears to common sense, an energy dispersed in little patches of flame throughout a sea of matter, wherever evolution or some other of “Nature’s gods” has capriciously caused it to “emerge.” It must rather be in some sense the reality of which this “Nature” is the appearance. Materialism is therefore excluded, but not, so far as I can see, Realism; for Realism may any day discover the reality of spirit.

Secondly, it must, I think, be a system which declines to take *Time* quite so seriously as it is fashionable at the moment to take it. Mr. Broad’s reduction of the traditional attributes of the Deity to empty compliments seems to me to depend chiefly on his attitude to Time. If Time is ultimate, Eternity has no meaning. Again, if Time is ultimate, Time is the creator, not a creature; and in Mr. Alexander’s account it is indeed the creator, creating Deity itself. But Christian thought, based no doubt in early days on Plato, has clung to the view of Time as

a creature, a pseudo-god, a "moving image of eternity." *Non in tempore, sed cum tempore, finxit Deus mundum.*

Jowett remarks that Augustine, when he wrote these words, was "apparently unconscious of the results to which his doctrine would have led." Perhaps so; and perhaps for us, too, the obscurity, and with it the danger, remains. But I cannot see that Time *must be* ultimate; and therefore this second condition is not to me in principle incapable of being fulfilled. The first condition being certainly in no worse case, I can only conclude that while some philosophies will find it difficult to make room for a personal God (as others for chairs and tables), it will always remain possible to construct metaphysical systems embodying that belief; and that it is extremely unlikely that either type of metaphysic will refute the other, except to its own satisfaction.



II. *By C. D. BROAD.*

I MUST open my contribution to this Symposium with a few words of personal explanation. The subject is one in which I feel very little interest. I do not believe that anything of importance remains to be said on either side from a purely philosophical point of view ; and I am rather specially unfitted, through lack of the relevant experiences, to discuss it with profit to myself or others. I originally wrote a semi-popular paper on the subject simply because the Student Christian Movement in Cambridge asked me to take the negative side in a debate with Mr. Shebbeare on "The Validity of Belief in a Personal God." And I afterwards published my contribution (to which I attached very little importance) for the sordid reason that I wanted to be paid for it. I venture to take up some of your time with these explanations for two reasons. In the first place I want to make it quite clear that my article in the *Hibbert Journal*, though it contains nothing which I do not believe to be true, is to be regarded as a speech by the counsel for the prosecution. And, secondly, I want to make it plain that the subject is not one which I should spontaneously have treated or which I mean to revert to in future.

I propose to confine myself almost entirely to the elucidation of certain points which are raised by Prof. Stocks' paper. Prof. Stocks holds that "God" must be defined or described as "the object of the religious act or attitude." It is then the business of the philosophy of religion to determine what properties such an object must have, and to see whether and how far the existence of an object with these properties can be reconciled

with what we believe on other grounds about Reality. I wholly agree with Prof. Stocks in thinking that it is futile to attempt to prove the existence of God, or to determine his nature if he does exist, unless one takes specifically religious experiences as part of one's data. But I think that we need to be told a great deal more in detail about the "religious act or attitude" before we can estimate the value of the line of argument which Prof. Stocks indicates. Prof. Stocks refuses to identify "the religious act or attitude" with religious emotion, although he regards the latter as an essential part of the former. He seems inclined to identify the "religious act or attitude" with worship, and to define or describe "God" as "the object of worship." I take it that he means to include under "worship" certain specific emotions, actions, and beliefs which are closely bound up with each other. Now, if this is to be the basis of our discussion about the validity of belief in a personal God, it is essential to begin with a general analysis of a typical emotional situation; to consider the general relations between emotions, beliefs and facts; and to discuss the causal relations between emotions and beliefs. When this has been done we can return to the particular complex mental state called "worship" and can consider what relevant conclusions, if any, can be based on the fact that it exists.

Analysis of an Emotional Situation.—By an "emotional situation" I mean the kind of event which would be expressed by such phrases as "I am feeling love for X" or "I am feeling fear of a dragon in the coal-cellar." In any genuine emotional situation we can always distinguish two factors, and in many we can distinguish a third factor. The two factors which are always present are (a) the presentation of a certain object, real or delusive, and (b) a certain emotional attitude towards this presented object. The third factor, which is often but not always found, is the belief that the presented object has certain characteristics and that it is *because of* these characteristics that this emotional attitude is

directed to this object. I will now say something further about each of these factors.

(a) The object is always presented either as now existing or as going to exist in the future. In the first case it may be presented by sense-perception, veridical or delusive, or it may be presented by an explicit existential judgment of the form "Such and such an object now exists." In the second case it must be presented by an explicit judgment of expectation of the form "Such and such an object probably will exist." The question whether the perception is veridical or delusive and whether the existential judgment is true or false is entirely irrelevant to the analysis of the emotional situation. The emotional attitude is directed to what is *believed* at the time to exist or to be about to exist, quite regardless of whether any such object does or will in fact exist. I call the presented object to which the emotional attitude is directed the "Epistemological Object of the Emotional Situation," and I say that every genuine emotional situation has an epistemological object, whether or not there is any ontological object corresponding to this. It must be admitted, however, that there are mental states, analogous to emotional situations, in which it is difficult to be sure whether there is an epistemological object or not. If these really have no epistemological object I refuse to call them "emotional situations," and I call them instead "emotional moods." But I think it quite likely that even here there is an epistemological object which is just very vaguely conceived as "things-in-general" or "the future."

(b) The emotional attitude may take various qualitatively different forms, *e.g.*, love, fear, awe, etc. And several qualitatively different emotional attitudes may be directed at the same time to the same epistemological object. They may then fuse in various ways to give complex emotional attitudes. Lastly, any specific kind of emotional attitude towards a given epistemological object may exist in various degrees of intensity.

(c) No doubt when an object is presented as existing or going to exist we nearly always have some further beliefs about its qualities and relations. Now it seems to me that such beliefs sometimes do and sometimes do not form an essential part of the emotional situation. When I have a certain emotional attitude towards a certain presented object two cases may arise.

(i) The attitude may be directed on to the object as such and without reference to my beliefs about its qualities and relations. I say then that the emotional situation is "immediate." In that case my beliefs about the characteristics of the presented object are not factors in the analysis of the emotional situation.

(ii) On the other hand, the emotional attitude may be directed to the presented object, not as such, but as believed to possess certain qualities and relations. I say then that the emotional situation is "mediated." In that case my belief that the presented object has these particular qualities and relations is an essential factor in the analysis of the emotional situation. It is important to notice two points here. (i) Even when an emotional attitude is *directed to* a presented object as such, and not to it as believed to possess certain characteristics, it may nevertheless be *caused by* certain characteristics which the presented object in fact possesses. The cause of my loving a certain person may be the fact that he possesses certain qualities which I neither know nor believe him to possess. (ii) When an emotional attitude is *directed to* a presented object as believed to possess certain characteristics it may nevertheless *not be caused* either by this belief or by the fact that the object does possess these characteristics. I may believe that a certain man is intelligent, and I may have the experience which would be described as "admiring this man for his intelligence." Yet he may not in fact be intelligent. And my admiration may not really be caused by my belief in his intelligence but by the shape of his nose and the tone of his voice about which I may have no

beliefs whatever. To say that a certain emotional attitude is directed to a certain presented object as possessing certain characteristics means only that I *believe* the object to have these characteristics and that I *believe* that the possession of these characteristics causes my emotional attitude towards this object. Either or both of these beliefs may be false.

I will now sum up my general analysis of emotional situations. Every emotional situation involves the presentation of a certain object and the direction of a certain emotional attitude towards this presented object. The object may be presented either by perception or by an existential belief or expectation. If the emotional situation be immediate no other factor is involved in its analysis. If it be mediated there will be a third factor, viz., a belief that the presented object has certain characteristics and that these determine the emotional attitude. Any or all the beliefs which are involved in an emotional situation may be false. The perception which presents the object may be hallucinatory, or the existential belief or expectation may be mistaken. Even if this be not so the presented object may not have the characteristics which it is believed to have. And, even if it has the characteristics which it is believed to have, the belief that these determine the emotional attitude may be false.

The Causal Relations of Emotion and Belief.—Having now analysed emotional situations to the best of my ability I propose to consider the causes and effects of emotional situations, and in particular the causal connexions between emotional attitudes and beliefs. An emotional situation arises when a certain object is presented and a certain specific emotional attitude is called forth and directed to this object. One cause-factor which must always be present is the pre-existing emotional dispositions of the subject. The occurrence of a particular emotional attitude on a particular occasion is determined by the stimulation of a certain emotional disposition. We must there-

fore consider what this stimulus may be. It seems to me that there are at least four important cases all of which actually occur. (a) An object may be presented and may be believed to have certain characteristics. This belief may determine a certain emotional attitude towards the object. And the emotional attitude may not determine any further beliefs about the characteristics of the object. *E.g.*, I find myself in presence of a dog which looks fierce and seems to be unchained. This presentation and these beliefs about the presented object determine the emotional attitude of fear. And this need not determine any further beliefs about the characteristics of the dog. (b) The second case resembles the first, except that the emotional attitude which is determined by my original beliefs about the characteristics of the presented object determines in turn certain further beliefs about this object. *E.g.*, I meet a certain person whom I admire because I think him good-looking, and then my admiration causes me to believe that he is intelligent. (c) An object is presented and a certain emotional attitude is called forth and directed to this object, not by any beliefs that I may have about the characteristics of this object, but by some quite different cause-factor. This might be (i) something purely internal, *e.g.*, the state of my liver ; or (ii) some characteristic which the object in fact possesses although I know and believe nothing about it ; or (iii) the characteristics which some other object possesses or is believed to possess. As a result of this emotional attitude I come to believe that the presented object has certain characteristics and that these are the cause of my emotional attitude towards it. *E.g.*, a man is rendered cross by business worries or by a torpid liver or by some unnoticed mannerism in the person whom he is talking to. As a result he feels anger towards this person. In consequence of this he believes, rightly or wrongly, that this person is being deliberately rude to him and that this is why he feels angry with this person.

(d) A certain emotional mood is called forth in the first or third of the ways enumerated under (c). This produces either an hallucinatory perception of a certain object or an existential belief or expectation, true or false. The emotion is then directed to this presented object, either immediately or mediately. In the latter case the belief that the object has certain characteristics which cause the emotion to be directed to it may itself be caused by the emotional mood, or it may be independent of this. *E.g.*, stories told to a child by his nurse may generate fear when the child goes into the dark, and this fear may produce a belief that there is a dragon in the coal-cellar, or even an hallucinatory perception of one. And the child may then be frightened of the dragon which it believes to be there, either immediately or because it believes that it will eat him.

There are three general observations to be made here. (i) When I say that certain beliefs about a presented object may cause a certain emotional attitude towards this object and that this may in turn produce further beliefs about the object I include under this heading the following special case. I may start by believing that a certain presented object has a certain characteristic to a certain degree. This may produce a certain emotional attitude towards the object. And this in turn may cause me to ascribe the *same* qualities and no others to the object but in a *higher degree*. One's admiration for a person may originally be caused by the belief that he is good-looking, and this emotional attitude when once generated may cause one to think him better-looking than one originally did. (ii) Such processes may go on alternately. The emotion may cause one to magnify the qualities of the object, and this magnification may in turn increase the intensity of the emotion. (iii) Just as there is no need for the beliefs which generate an emotion to be true, so there is no need for the beliefs that are generated by an emotion to be true. We must distinguish the following cases. (1) If

the existential belief be generated by the emotional attitude it is much more likely to be false than true. For its truth, if it be true, will be the merest matter of chance. (2) If the existential belief be true, but the emotional attitude generates some part of the beliefs about the characteristics of the object, two cases may arise. In the first place the emotion may directly generate the belief. If so, the truth of the belief, if it should happen to be true, will be a matter of pure luck. Secondly, the immediate effect of the emotion may be that we take a much greater interest in the object and pay much greater attention to it. This will increase the likelihood of our discovering characteristics of the object which we should not otherwise have noticed. When an emotion determines a belief in this indirect way there is a fair chance that the belief may be true. Both these alternatives are often realised in the beliefs which are caused by the emotion of love. If I love a person I do no doubt notice minute details about him which I should not have noticed if I had not loved him. And this may very well give rise to true beliefs about certain of his characteristics. On the other hand, the emotion may directly cause me to exaggerate the admirable qualities which I already believed him to have and to ascribe other admirable qualities to him for which there is no good evidence.

Appropriateness of Emotion to Object.—There remains one other important point to be cleared up in connexion with emotional situations. This is the notion of *appropriateness*. This involves a question of value, which may be called "ethical" or "aesthetic," according to one's definition of these terms. In general outline this notion of appropriateness is perfectly familiar to everyone. It is appropriate to feel sorrow at the misfortunes of one's friends, and it is inappropriate to feel admiration for an ugly building. Moreover, even when the specific *kind* of emotional attitude which is felt toward a certain

object is appropriate to that object, the *intensity* of it may be inappropriate. Enthusiastic admiration for a quite moderately beautiful picture is inappropriate in degree. The general principle is that there is a certain kind and degree of emotion which is appropriate to an object which has certain characteristics to a certain degree. And this means that if any different kind of emotional attitude, or any different degree of the same emotional attitude, were felt towards this object, the total emotional situation could not be intrinsically better and might be *intrinsically* worse. (It might of course be *instrumentally* better to feel a different kind or degree of emotion. The appropriate kind and degree of sorrow for a given misfortune might tend to incapacitate one from giving the help which one could otherwise have given.)

We must now go into further detail. It is necessary to draw a distinction between *formal* and *material* appropriateness, analogous to the distinction between the formal and material correctness of an argument. An emotional attitude is materially appropriate if the presented object actually exists and actually has such characteristics that the emotional attitude which is felt towards it is appropriate to it. An emotional attitude is formally appropriate provided that it *would* be materially appropriate if the presented object existed and had those characteristics which the person who feels the emotion believes it to have. If I believe that a friend is in pain an attitude of sorrow is formally appropriate and an attitude of amusement is formally inappropriate. If my belief is mistaken, and he is really rocking with suppressed laughter and not writhing with pain, an attitude of sorrow is materially inappropriate and an attitude of amusement is materially appropriate.

It only remains to add that nearly all the remarks that I have made about emotional situations can be applied in principle, *mutatis mutandis*, to conative situations.

Application of these Results to Theology.—The description of "God" as "the object of the act of worship" seems to me to have two closely connected defects. (1) A definition, or a description which is used in place of a definition, should not contain a tacit assumption. Now when we talk of "*the object*" of a certain act we are assuming that this act has one and only one object. This ought to be proved and not assumed. If we confine ourselves to the *actual* objects towards which religious emotions have been felt it seems certain (a) that such emotions have been felt by the same person towards many different objects of the same kind, and (b) that they have been felt by different persons towards objects of different kinds. I suppose, *e.g.*, that a polytheist worships a number of objects of the same kind. And, again, I suppose that Spinoza felt towards the Universe as conceived by him the same kind of emotions which ordinary theists feel towards their God or gods. And yet it is certain that the Universe as conceived by Spinoza is quite a different kind of object from God as conceived by ordinary theists. (2) This difficulty could in part be avoided by substituting for the phrase "the object" the phrase "*the appropriate object.*" I suspect that this is what Prof. Stocks really means. And I think that this change ought certainly to be made. We should, I think, be quite justified in saying that, although Jehovah and Jupiter and Huitzilopochtli have in fact been objects of religious emotions and acts, yet they were formally inappropriate objects. And I should not hesitate to say that, although Spinoza undoubtedly did feel religious emotions toward the Universe as he conceived it to be, yet the Universe as conceived by Spinoza is a formally inappropriate object for such emotions. But, even when this substitution is made, we ought to leave out "the" in our description. We ought to say: "A god is a being which has such characteristics that the emotion of worship is appropriate to it." We might admit that only one *kind* of

being could answer to this description, though even this seems to me to need proof. But, even if we admitted this, it would still be necessary to prove that there could be only *one being* of this kind. I think that it would be held by Prof. Stocks that no object would be formally appropriate to the emotion of religious worship unless it were believed to have the characteristic of uniqueness. Probably most philosophic Theists would agree with this, and it may very well be true. But it is a synthetic proposition, and it should be stated separately and explicitly and not smuggled in under the form of a descriptive definition.

If we descriptively define "a god" in this way a system of hypothetical theology could then be developed. It would consist in determining as accurately as possible what characteristics an object would have to have if it were to be an appropriate object of the religious act or emotion. Let us see what these characteristics are according to Prof. Stocks. (1) I am not clear whether he holds that the object would have to be the Universe as a whole. He says that in the religious act or attitude a man "is in response and relation to the world as a whole." He also says that "Religion offers . . . a certain reading of the world as a whole . . . the religious truth emerging in the religious act as the vision of the ordering principle of the whole." In another place he is more specific. He tells us that the religious act or attitude is bound up with the belief that "the world is an order in which man's spiritual interests are recognised and securely established." Putting these statements together I come to the conclusion that Prof. Stocks probably means to assert something of the following kind. The appropriate object of the religious attitude is *not* the world as a whole but is something which is believed to be "the ordering principle of the world." But the religious attitude is inseparably connected with certain beliefs about the world as a whole, viz., that it is an order in which man's spiritual interests are recognised and

securely established, and that it has an ordering principle. It should be noted that neither of these two beliefs about the world as a whole implies the other. The world might have an ordering principle but men's spiritual interests might not be guaranteed. And man's spiritual interests might be guaranteed (as they would be on Hegel's or McTaggart's views of the Universe) without there being "an ordering principle" in any other sense than a set of fundamental facts about the structure of the Universe.

Now, granted that the religious attitude and these beliefs about the world as a whole are inseparably connected, I am still quite in the dark as to the precise relations between the two. Do the beliefs call forth the emotional attitude and present it with its object? Or does the emotional attitude generate the beliefs? Or does the belief that the Universe is such that our spiritual interests are guaranteed call forth the religious attitude, and does this in turn cause the belief that there is an ordering principle and direct the religious attitude on to this supposed ordering principle? Or do we start by believing that the Universe is *more or less* favourable to our spiritual interests, and does this produce an emotional attitude which in turn generates the belief that our spiritual interests are "*securely established*"? It is surely of vital importance to have some answers to these questions before we can decide what weight to attach to these beliefs.

(2) Prof. Stocks further holds that no object would be appropriate to the religious attitude unless it were capable of "responding" to the worshipper. He holds that one essential factor in religious experience is that there is a feeling which the worshipper interprets as response by the object of his worship. By saying that a God must be "personal" we mean that it must be capable of responding, and we do not mean to assert any more than this and whatever may be implied by this. Now we are acquainted with nothing that can respond to our emotions except persons. We are thus compelled to think of God by analogy

with a finite person. But we may quite consistently admit that the analogy is imperfect and that we do not know how to fill in the details. I find myself in complete agreement with this. It is because the Universe as conceived by Spinoza is admittedly incapable of responding to the worshipper that I hold that it was an inappropriate object for the religious emotion which Spinoza undoubtedly felt towards it.

We now come to the final question. Suppose we admit (as I am inclined to do) that there is a specific kind of attitude called the "religious attitude." Suppose we admit that it is bound up with the belief that the Universe is such that our spiritual interests are "securely established," and with the further existential belief that there is an "Ordering Principle" which guarantees this. Suppose we admit that the appropriate object of the religious attitude is this supposed Ordering Principle, conceived as unique and as capable of responding to the worshipper and therefore as so far analogous to a person. Are we a step nearer to answering the question whether the belief in the existence of an object with these characteristics is *valid*? Prof. Stocks interprets the word "valid" in such a way that the question is hardly worth asking. He says: "What is a valid belief except something with which metaphysics must reckon in the account that it seeks to render of reality? In this sense it seems evident that the belief in a personal God is as valid as the belief in Space and Time and Matter, or in the chairs and tables of the external world." Certainly "in this sense" the belief is "valid"; but in this sense the statement that the belief is valid is a perfectly trivial proposition which no one has ever denied. Even if one held the preposterous view that religious beliefs, emotions, and rites were "invented by Kings and Priests for the enslavement of peoples" they would still be "something with which metaphysics must reckon in the account that it seeks to render of reality." Surely, *e.g.*, Berkeley was discussing

the " validity " of the belief in matter ; and surely it would be a very odd answer to make to Berkeley to say that the belief is valid because metaphysics has to reckon with it.

When I am asked whether a certain belief is valid I understand the question to mean, not whether the belief *exists* and is important and not whether it is *true*, but whether we are justified in holding it on the data available to us. The only answer that I can find in Prof. Stock's paper to the question which we are supposed to be discussing is the following sentence : " The evidence of the existence of such an object is to be found in the religious act itself." Now I hope that after the analysis of the earlier part of this paper it is perfectly evident that this is not true. The existence of an emotional attitude guarantees the existence of its causes and of its effects. Some of these causes and some of these effects are or may be beliefs. If so, the existence of the emotion guarantees the *existence* of these beliefs. But it has not the faintest tendency to guarantee their *truth*. And I must confess that this seems to me so obvious that I am almost ashamed of labouring the point.

III. By W. G. DE BURGH.

DR. BROAD closes his paper with some strictures on Prof. Stocks' use of the word "validity." When Prof. Stocks describes a valid belief as one "with which Metaphysics must reckon in the account that it seeks to render of reality," Dr. Broad takes him to mean merely that Metaphysics must recognise that the belief is, in fact, believed; and observes that this is a "perfectly trivial proposition." Prof. Stocks surely means that the belief in God must be "reckoned with" by Metaphysics, not only as existent, but as true. The claim is analogous to Prof Alexander's, when he declines to identify God with Space-Time, because Space-Time cannot evoke in us the response of worship—cannot, that is, satisfy the legitimate requirement of the religious consciousness. I understand Prof. Stocks to hold that the reality of God, the appropriate object of worship, is assured on the evidence of religious experience; and that philosophy, in its attempt to synthesise knowledge, must "reckon with" this fact among the rest. At any rate, I accept Dr. Broad's statement that by the validity of a belief we mean that "we are justified in holding it on the data available to us." What, then, are the data that can justify the belief in a personal God? They may be sought either within the specifically religious experience, or beyond its pale. The latter is the traditional procedure, the former the most favoured by philosophers to-day. Prof. Stocks and Dr. Broad are in substantial agreement that the belief in question must stand or fall on the evidence of "the religious act or attitude." Neither of them deigns to notice the historic "proofs." Now, I frankly admit that it is not possible to prove, or, for the matter of that,

to disprove—and the *onus probandi*, as Prof. Stocks says, lies on the objector—the God of Theism by any argument, scientific or metaphysical, of a non-religious character. To quote Dr. Broad: “It is futile to attempt to prove the existence of God, or to determine His nature if he does exist, unless one takes specifically religious experience as part of the data.” I note, with gratitude for small mercies, the qualification implied by the word “part.” Moreover, in the minds of religious persons, the belief in God has its source elsewhere than in metaphysical arguments, and is apt to persist unshaken by the objections to which such arguments are obnoxious. The very demand for proofs implies that the belief has been reached by other ways. Nor, again, could any proof, however convincing, avail to satisfy the demand of the believer. As the late Prof. Cook Wilson has put it, we do not want an “inferred God” any more than we want “inferred friends.” We want a God whom we know, as we know our friends, by personal contact and intercourse of acquaintance. Once more, were the proofs forthcoming, they would go far to destroy the value of the religious life. Men would walk by sight and not by faith. Kant’s saying as to the conditions of moral experience applies here also. Human nature being what it is, the limitation of man’s cognitive faculties testifies to their wise adaptation to his practical destination.

Why, then, has religion concerned itself—as on its higher levels it always has—with speculative grounds for its convictions? Partly, no doubt, to dispel objections raised in scientific and philosophical quarters against a faith whose primary basis is in religious experience. But there is another reason, intrinsic to that experience itself. Prof. Stocks has noted how religion, like “all first-grade activity,” calls into play the whole of human personality. It is, from the first, both theoretical and practical. The intellect, once brought into action, craves for intellectual satisfaction. *Credo ut intelligam*. For the vision of faith is

admittedly defective and provisional. In its effort to clarify this vision, the intellect of the believer turns towards science and philosophy ; not to ground its assurance on logical demonstration, but to trace such harmony as is discernible between the revelation of religious worship and the reasoned interpretation of what is, *prima facie*, non-religious experience.

This is why I cannot acquiesce in a curt dismissal of the traditional so-called "proofs." "Proofs" they are not, for they fall short of proving the God of religious experience. Even the narrower conclusions that they may fairly claim to mediate rest on premisses which many philosophers would call in question. But reasonings which, while falling short of the desired goal, yet point unmistakably in its direction, are scarcely to be ruled out as worthless. I must touch briefly on this matter, despite my wish to keep as closely as possible to the ground marked out by my two predecessors. I cannot assent, for instance, to Dr. Broad's remark, in his Hibbert article on "Butler as a Theologian," that the Cosmological argument "has been completely exploded" by Kant. Unless we are prepared to accept the Kantian positions as to the limits of possible experience, the exclusive applicability of the causal concept within the sphere of the sensible, and the severance of the phenomenal and noumenal worlds, I cannot see how Kant's criticism affects the principle of the argument. Kant showed that it did not prove a personal God. But the reasoning from contingent fact to a necessary being holds its ground. To quote Prof. Taylor (ERE. xii, 279a—Art. *Theism*, "The point of the argument is that, if there is not a First Mover or First Agent (or 'movers' or 'agents' in the plural, as the case may be), the whole history of the world is a mere accident." This alternative, first presented by Plato in conjunction with the appeal to design in the tenth book of the *Laws*, remains, for all Kant's efforts, a valid alternative to-day. Dr. Whitehead, for example, in his last-published volume, argues on cosmological lines from

the contingency of the actual to God as ground of limitation, whose activity of selection among the infinite metaphysical possibilities redeems the world of fact from the stigma of unreason. I gather that Dr. Broad regards the argument from design as the more deserving of consideration. To my own mind, there is something arbitrary in their separation. Can we intelligibly interpret the process of emergent evolution without "acknowledging"—in Prof. Lloyd Morgan's phrase—a principle analogous to Aristotle's, that act is metaphysically prior to potentiality? Can we rightfully speak of purposive behaviour apart from purposive intelligence? The use of teleological terminology is not atoned for by the addition of a codicil to the effect that by purpose is meant nothing that the term can intelligibly connote. Questions such as those are forced upon us by the facts; and the ancient answer of Plato, that *νοῦς* is the *αἰτία* of the universe, is still a live option for the philosopher.

There is yet another line of reasoning, more relevant to our purpose, that has been ignored by my two predecessors in this symposium. However it may be with the Cosmological argument, the moral argument, at all events, was not exploded by Kant. True, its cogency depends on the acceptance of views, in ethics and metaphysics, that are challenged by many thinkers. It rests on a theory of reality for which fact and value are not disparate, but one. It assumes, again, that the Good is no mere regulative norm, but the ultimate reality, and that moral experience can only be rationally justified if the moral law is unconditionally valid. These are large assumptions, which adherents of a purely empirical ethics are bound to reject. It is interesting, therefore, to find Prof. Alexander suggesting that faith in the emergence of deity is the outcome of moral faith. Treating of "Deity and Value," he remarks (S.T.D. II, 428) that "it is because we ourselves make for righteousness, that we have faith in this further *nisus* of the universe, and are sustained by that

sentiment so as to derive help from it in doing righteousness." It is not easy to reconcile this statement with the view, expressed in an earlier passage (II, 331-2), that "consciousness of obligation is the consciousness we have that right action is the judgment of the standardised mind; that it is what the standard or collective mind wills."

An acceptance of Kantian ethics carries us, of course, much farther—farther even than Kant's own conclusions to God's providential government as satisfying the rational demand for harmony between moral goodness and happiness. "Reverence," says Kant, "is possible only towards persons." If this be so, its appropriate object can scarcely be an abstract formula. To quote Prof. Cook Wilson: "It is true that we speak of reverence for the moral law; but again I believe no such feeling possible for a mere formula, and that, so far as it exists, it is only possible because we think of the moral law as a manifestation of the nature of the Eternal Spirit" (*Statement and Inference*, II, p. 862). No merely human persons, he maintains, can call forth the peculiar feelings of solemnity and awe that belong to reverence. It "seems directed to one spirit and one alone, and only possible for spirit conceived as God" (*ib.*). I do not expect from Dr. Broad any sympathy with this line of argument. For one thing, the ascription of moral perfection to the Deity strikes him, as he told the Students' Christian Movement, as analogous to the title "Your Serene Transparency" when applied to German princes. Dr. Broad's gibes generally conceal a truth of genuine significance; and even this is no exception to the rule. Moral goodness, like personality, must be attributed to God *sensu eminentiori*. For moral experience, the "ought to be" never "is," and the facts are never what they "ought to be"; while in God the ideal is actual, and the distinction of "ought to be" and "is" has lost its relevancy. That is just what I meant when I said that the moral argument implies that fact and value are one. It needs,

however, but a slight acquaintance with the history of the *via analogica* in Neo-Platonic and Christian religious thought to differentiate the ascription to God of moral—and other—attributes *eminenter*, from the rendering to Him of an empty compliment. It is strange that Dr. Broad, who has so keen an eye for fine distinctions, should seem unaware of this. A second criticism will be directed against the appeal to reverence as a datum for argument. This brings me to the central issue of our discussion, that of the nature and validity of the specifically religious experience.

II.

I think that Dr. Broad exaggerates the disqualification, for discussion of this subject, of those who lack “the relevant experiences.” He might as well rule out of court those who enjoy them on the ground that their assurance needs for them no justification, and that they are therefore disqualified from forming an impartial estimate of its value. I shall argue presently that the specifically religious experience is commoner than is supposed. Even where it is most obviously wanting, “sympathetic intelligence,” as Prof. Alexander has told us (II, 383), “may to some extent take the place of direct and vivid experience.” A philosopher, who realises that his own power of æsthetic appreciation is a poor thing when compared with the creative insight of the artist, may yet be capable of an intelligent interpretation of the nature and value of the æsthetic activity. The same is true in the philosophy of religion; and it is in this temper that I myself approach the subject. Dr. Broad, however, goes further, and disclaims interest as well as direct experience. Perhaps this is what led him to devote so much of his paper to psychological considerations that appear to me of subordinate importance for the main issue.

We may take for granted, in this connexion, that the religious

experience is unique, and that its characteristic expression is the act of worship. I would add that worship, on the highest plane at all events, is conjoined with the love of God, its appropriate object. Religion, like any other "first-grade activity" of the human spirit, must be taken at its highest, if we are to form a sound judgment as to its validity. The question of origins has little or nothing to do with its value. It is admitted, further, that the religious attitude is a response that calls into play the whole of human personality. But if this be so, it is inadequately described in terms of an "emotional situation." As in moral or æsthetic experience, the conative and cognitive factors are at least as essential as the emotional. Dr. Broad throws out the suggestion that his analysis can be applied, *mutatis mutandis*, to conative situations, and I cannot help wishing that he had substituted this treatment in his paper. But, despite Prof. Stocks' *caveat*, he interprets the religious attitude as emotional, and a large part of his paper is occupied with an analysis of typical emotional situations and of the relations, within these, of the emotional factors and beliefs. I readily agree with his conclusion, that the mere existence of an emotional attitude, while it guarantees the existence of such beliefs as are causally connected with it, fails as such to guarantee their truth. I do not see how anyone could question this, and therefore I do not propose to enter upon a full discussion of his analysis. I certainly cannot accept as they stand certain of the distinctions which he draws so rigorously; that, for example, between the epistemological and the ontological object. I felt, as I read Dr. Broad's pages, as though I were set down in an examination hall to answer a question-paper with the heading "Discuss the validity of the following disjunctions." Then I called to mind a certain saying of a philosopher, whose name is hardly to be mentioned to-day in respectable metaphysical circles, about the "Either . . . or of the abstract understanding"—and was comforted. There are two of his points,

however, that have a special bearing on my main argument. (i) I cannot agree with Dr. Broad's view that in the religious experience "a certain object is presented and a certain specific emotional attitude is called forth and directed to this object." Rather, I hold, with Prof. Alexander, that here, at all events, "knowledge comes with action or the response to the things which we know." (II, 374). We do not start with a presentation of God and go on to an emotional attitude towards him. We are directly up against a given reality. In the second place (ii), the awareness of this reality is wrongly described as "belief." The child is afraid of the dragon in the cellar before he "believes" that the dragon exists there. The man who greets his friend doesn't "believe" in his friend's existence or in his affection; he "knows" it by direct acquaintance. "Belief" implies the possibility of doubt, and this possibility is here excluded. The knowledge of God revealed in religious experience only becomes matter of belief when subjected to reflective analysis, *i.e.*, when it enters into theological or metaphysical speculation. Belief is generated by the experience; but the experience itself is not belief but vision, an immediate awareness of the presence of God.

This cognitive factor, the vision or awareness, determines, to my mind, the question of validity. If the existence of the appropriate object is ever guaranteed by direct awareness—and, were it not, it would be hard to justify our assurance of the existence of other selves or of an external world—it is surely guaranteed here. For, as we have said, religious experience is admittedly of high value; and, if its cognitive character be granted, that value must surely include the truth-value of the cognition. Moral experience furnishes an instructive parallel. It, too, is not merely practical, but directly cognitive. The assurance of the reality of the moral order, given in and through moral volition, is, as Kant was never weary of insisting, independent on intellectual reflection, and is vouchsafed as

freely to the plain man who does his duty as to the critical philosopher. Wordsworth was even more bold, when he wrote : "Let him who would arrive at the knowledge of nature train his moral sense ; let him act and conceive in accordance with the noble essence of his soul, and, as if of herself, nature will become open to him. Moral action is that great and only experiment in which all riddles of the most manifold appearances reveal themselves." If moral insight, though beyond the reach of logical mediation, is yet knowledge, the like may surely be claimed for the insight of religious worship. There is at least a *prima facie* presumption in its favour. This is not to "vilify reason," for reason is wider than ratiocination.. The appeal to faith in God is as rational as the appeals to faith in moral goodness or in an external world or in other selves, objects which equally transcend the scope of demonstration. It is an appeal, not to an emotional attitude, but "to the mind in that state when reason presides."

In his Hibbert article and elsewhere (*e.g.*, *The Mind and its Place in Nature*, p. 318), Dr. Broad discounts the evidence of religious experience on the grounds, (a) of the rarity of its occurrence, and (b) of the difficulty of verification. (a), I think that he has greatly underestimated the frequency of this experience. When he speaks in this connexion of what he calls "the alleged supersensible perception of God," I am not quite clear as to his meaning. Does he mean awareness of God as a supersensible object, or awareness of such an object in total detachment from any accompaniments of a sensuous character that may serve as the vehicle or instrument of the awareness ? And is he speaking of the same experiences as the "specifically mystical and religious experiences" referred to at the close of the article ? Direct religious experience is certainly not confined to experiences of mystic ecstasy. Nor can it be restricted to those who avow their adhesion to some form of institutional religion or some par-

ticular theological creed. Many, too, are reluctant, from self-depreciation or from a not ignoble aversion to publicity, to admit, even to themselves, a share in such experiences. There are those also, who understanding by "God" some popular or theological rendering of the term, would repel indignantly the suggestion that He was the object of their reverential worship. Prof. Cook Wilson, again, has pointed out how "even in the acts of knowing and perceiving there may be something really existing and operating in our minds of which we may not be explicitly aware." He instances the concepts of Causality and the Self, which, though necessary elements in our thinking, have been denied to exist even by philosophers. Few persons with any gifts of penetration can go through life without making the discovery that among the most religious of their acquaintance are some who disclaim that they have any religion at all. Finally, when we come to the case of the "deity-blind," can we seriously attach any value to their negative evidence, any more than, in the philosophy of art, to the fact that certain persons appear wholly destitute of æsthetic appreciation? The opinion of such persons simply does not count.

Secondly (b), the truth of religious experience admits of verification. Its value is manifest, not only to the experiencer, but also to the impartial spectator of his experience. Religion, as a life of direct communion with and response to God, is something that perforce commands the respect alike of the philosopher and of the man in the street; and the respect is proportionate to the contempt evoked by religious formalism or pretence. The experience is thus implicitly acknowledged to be of serious moment, by a judgment independent of the claim to any share in it. Men see that those whose lives are informed by the religious temper are not crazy fanatics, of disordered brain or constitution, but, for the most part, sober citizens of the world, who order their affairs with wisdom, and display an exceptionally clear perception

of the character of other men and of the finer bearings of situations of fact. They are, in general, distinguished from their fellows, not by abnormal habits or obtrusive assertion of their religious convictions, but by an inward contentment and harmony of disposition that spreads itself insensibly over their immediate environment, and is manifested, under crises in which others would be overpowered by despondency, in an even joyful acquiescence in divine providence. Their consciousness of God, gathering increase from each occasion, whether of joy or suffering, as it comes to them, casts an ever brighter and steadier illumination over the whole process of their lives. It is a profound error to gauge religious experience in terms of the exceptional phenomena of rapt or, again, of sudden conversion. These occur and have their peculiar significance; but their real value is as moments in a coherent course of life. Here, in religion as a coherent course of life, is to be found the verification which Dr. Broad—and, I gather, Prof. Stocks also—are unable to detect. It is not a question of the “external confirmation” of an alleged miraculous intervention with the process of physical nature. Divine providence and the spiritual activity of the human worshipper in prayer imply supernatural intervention just as much and just as little as the artist’s activity of genius, which determines the course of every line upon the plate or canvas, and yet leaves the processes of physical nature operative and undisturbed. Is it reasonable to charge the one activity, any more than the other, with illusion? Quite apart from the difficulty, which I believe to be insuperable, of explaining how such experiences could have arisen as illusions, they present the very characteristics that differentiate for the psychologist veridical from illusory apprehensions. The one will fit in with consistent behaviour and the other will not. Applying this test to the case before us, we find (i), that God does not reveal himself to his worshippers on rare and transitory occasions, but is known as

an abiding presence that informs the most varied situations and occurrences of life, and (ii), imparts to them a significance and a harmony inexplicable save on the assumption of divine providence. We find (iii), that the effects of this experience upon his life and character are recognised by his fellow-men, even by those who have no direct participation in such experience. And, lastly, (iv), we find that those whose lives are thus illumined by the religious vision possess an almost uncanny power of discerning, even in the most unpromising and apparently most irreligious natures, the signs of a faith akin to their own. To account for facts of this quality as due to delusional insanity, or to set them, as regards their truth-value, on a level with the child's dread of a dragon in the cellar or the drunkard's "vision" of pink rats, is to indulge one of those "silly" theories which, as Dr. Broad has pointed out elsewhere, could never occur save to the mind of a philosopher.

III.

The business of philosophy is, I take it, to elicit the implications of religious experience and to bring it to a clearer consciousness of itself, and, further, to discover in what form it can best be harmonised with the rest of our knowledge. This is what is meant by saying that it must be "reckoned with" by metaphysics. Such a task would involve discussion of almost every philosophical topic, and I fear that I have already been too diffusive. I will conclude with a brief reference to two points raised by my predecessors in this symposium.

First (a), as to the meaning of the term "God." Dr. Broad, speaking of the God of popular religion, characterises Him as an external being, whose chief attribute is power, a being finite and imperfect, one among a number of similar beings who are equally divine. That God has often been thus conceived is, of course, undeniable. But such is not the God of whom man is aware in the

direct religious experience of which we have been treating. I do not know under which of Dr. Broad's three heads—the popular, the theological, and the philosophical (the reference is to the Hibbert article)—this religious experience falls. Not under the two latter, for these imply reflective mediation; and reflection, though it normally supervenes, is subsequent to, and derivative from, the primary assurance. Further, in the living experience of worship, God is revealed not merely as transcendent, but as an indwelling and active presence in the heart. Nor have we to wait for the theologian, as Dr. Broad suggests, to “push all the attributes of God to extremes.” Theology does little more than formulate conceptually the implications of direct experience. “Jehovah and Jupiter and Huitzilopochtli” cause me no anxiety. Dr. Broad seems to me to be confusing here numerical diversity with variations in the apprehension of what is throughout a single object. Nor will any serious religious thinker question that the gulf that parts God thus “ignorantly worshipped” from the God of developed monotheism is as nothing in comparison with that which stretches between his own weak and partial vision and the full reality of the object of his worship.

In the second place (*b*), as to the meaning of the term “Personality.” That, as applied to God, it connotes response is admitted both by Dr. Broad and by Prof. Stocks. I would add “stimulus”; for experience of divine grace plays as important a part in religion as that of prayer and adoration. The question is not so much that of God's “personality”—the term is avowedly used *eminenter*—as of His personal intercourse with mankind. The Christian belief in the Trinity can be understood only in the light of the belief in the Incarnation. That is to say, the problems of divine and human personality are, as Prof. Webb and others have pointed out, intimately interlocked. The special metaphysical difficulty besetting the subject seems to be not that of differentiation within the divine nature—for the problem how

the One is also Many has to be faced by any metaphysic—but rather that of conceiving God as in His nature unchangeable and above relations to His creatures, and yet as entering into particular and changing relations towards them. For any religion that can stand its ground as religion, the relations must be as real as the nature. We are here in deep metaphysical waters, especially since, as Prof. Stocks has indicated, there is involved the problem of the ultimate reality of Time. Dr. Broad has not taken up the challenge, recognising, doubtless, that so large a subject would require a symposium of its own. But I fear that, so long as this issue is in abeyance, neither party to the present controversy can hope to make much impression upon the other.



SYMPOSIUM: THE PLACE OF MIND IN NATURE.

By L. T. HOBHOUSE, J. A. SMITH AND G. C. FIELD.I. *By* L. T. HOBHOUSE.

WHATEVER we can know about Mind in nature has its basis in our knowledge of Mind in man. This knowledge has itself been called in question. It is questioned whether we do in fact or can know Mind either in ourselves or in others and even whether the term Mind is an expression for any distinctive form of experience. These questions deserve full discussion in another place. For ordinary purposes, including the discussion of any other philosophical questions, we all assume an affirmative answer to them, and it is in fact difficult to speak or write except in language carrying such implication. It is not the object of this paper to criticise these assumptions but rather to consider some of their applications, though in doing so we may hope to obtain some light upon the last of them, for what Mind is must be mainly expressed in what Mind does, and what Mind does is our question. We shall approach this question by enquiring whether there is any form of behaviour which is—(a) characteristic of Mind in general; (b) peculiar to Mind; and (c) such that specific differences within it serve as a good basis for the comparison of different forms of mental activity.

When an excavator finds a piece of flint polished or chipped to a certain shape, with a fine edge, he classifies it as an axe-head and imputes it to the work of man. The basis of the inference consists in a positive and a negative premise. The parts of the flint are related to one another in such wise as to

form a whole suitable for use in cutting. Such a correlation of parts within a whole is suggestive of human activity. So is the use which appears as the governing feature or correlating principle of the whole. Of this nature is the positive evidence. It remains to consider alternatives. Can any other agency be suggested which might produce the same arrangement? In some cases in this particular field of enquiry such an alternative has in fact appeared possible, and the question whether Eoliths are artefacts or not has been the subject of controversy. Though human agency effects correlation, it appears that correlation may also be effected by other agencies as well.

Let us begin by examining the first of these statements. How does the flint worker come to make his axe? We naturally answer by supposing him in the first place to want something to cut things with. If we ask why he wants it the answer will be that it is to serve other ends, and if we pursue this course of enquiry we shall be led on to consider the relation of this want to his life as a whole and even beyond that to his relation to other beings. For though we should certainly find things that he wanted on their own account and should distinguish these as ends by contrast with things wanted only as means to them, we should find that the ends stood in various relations to one another, sometimes conflicting and sometimes harmonising. We should find the man often embarrassed by the conflicts and compelled to a choice, and we should recognise the considerable difference between those whose ends together form a coherent system, working in with one another and consistently developing a single principle, and those whose ends by conflicting result in more or less of mutual arrest and defeat. Clearly on this side correlation may be carried to a certain point and beyond that point may fail. We might conceive a correlation of all the acts of an individual and of all individuals whose lives touch one another, and again we might conceive an absolute anarchy of

wants, so that while each man seeks to fulfil the want of the moment, this want is in no way correlated with any others, but is pursued without regard to consequences, and between these extremes we may imaginatively interpolate any number of intermediates; and many such intermediates do in fact accord with our observation.

Turning now to the question what any given want is, and how it operates, we remark first that as bare want it is best characterised by negatives. As wanting, we are not satisfied, we lack something. Sometimes this negative seems to be the whole of the matter, for we may want without being able to say precisely what we do want. But even this seemingly negative condition has its positive character, in that it leads to action. We are physically or mentally unrestful, change our position or our place, seeking rest and finding none. Our want seems at least to have this much of the positive about it, that it aims at escape from the present situation. But fortunately for us it is often much better defined. We form an idea of what we want, and if we can connect the idea with the actual situation the want changes into an effort to mould the situation on lines leading up to the realisation of the idea. Our behaviour now proceeds on a system of which the basis is the actual situation and the apex a future in which the thing wanted is realised as the End, while the interspace is filled in with a correlated series of acts determined by references to their bearings on the End. If we ask how we come to make these references and to decide on the bearings of each act, the answer must in general lie in back-references to previous experiences and often to very complex correlations of experiences. The whole process of the translation of the want into a successfully executed purpose then resolves itself into a correlation of elements which may be of very great scope and complexity.

It may be asked here what it is that we actually correlate. Is it literally past experiences as events that once occurred to

ourselves or others? Can we be supposed to be adding anything to those things which are past and gone? This seems paradoxical, yet we refer to them, to some of them quite explicitly, and to make a reference is surely to institute a relation. When I definitely remember an incident in my own life of yesterday, or last year, I certainly add nothing that affects that incident. "I perfectly remember telling you at the time"—my memory, correct or incorrect, does not affect the telling. Perhaps it does not convince you now, but it convinces me; it is a relation between past and present which, though it does not affect the past, does affect my present and enters with it into the statement, "I am only telling you now what I told you a week ago." I think, then, that in the explicit memory judgment there is a true correlation of the past with the present, but such explicit memory forms but a small portion of our use of the past. In more general terms the past leaves behind it a mass of effects which, in the operation of a want informed by an idea, we are able to deal with very freely, seeking out, selecting and combining what falls in with the requirements of our ideal system. The correlation of the present with the true past is indirect, accomplished at two or, for that matter, at many removes, and the elements directly correlated—that is, so fitted to one another as to form a new whole of specific character—are results of the past.

Somewhat analogous difficulties arise about correlation with the End which is in the future. The point as I see it is not that the End, being future, does not exist when I plan. No more does the past exist now. It is a mistake to speak as though the past, *qua* past, maintained its existence in the sense in which the future has no existence. What has been may continue unchanged now, but its continuance now is an event of the present, not an event of the past. What is now is becoming the future, and in any respect there may be no change, so that what is now may also be then, but its being now is not the same as

its being then. Both events, with whatever is between them, make up the larger event of its continued existence from now to then. So far, past and future stand on one footing in a perfectly determinate system of events. Our difficulty does not concern relation to the future as such but the relation of purpose to its fulfilment. The purposive system which we form is an effort to mould the present to a particular future. The effort may fail, and if so the End with which we say that our acts are correlated is not merely non-existent now, it is non-existent altogether. How, then, can it enter as a term into a relation? The reply is that it is not the non-existent End that determines the purposive act but the antecedent or contemporaneous judgment of the tendency of the act towards such an End. The judgment may in fact be false or it may be true, and not only true but rationally founded on the real tendency of the act. In that case we may say that the tendency of the act, being the ground of the judgment which affirms it, is a true condition of its performance. But we should not refuse the title of purposive character to incomplete or broken purposes, and of purposive activity in general we must be satisfied with the definition that it is a system in which each constituent is conditioned by judgments of its tendency taken in conjunction with the rest to conduce to a certain result, which is the modification of the actual in accordance with an ideal system. Correlation with the future, then, really means correlation of acts by judgments of their tendencies and is actually effected so far as these judgments are well grounded.

We think, then, of the array of events in any plan as owing their order, and some of them their very occurrence in the special character which they assume to a common ground, which we think of as the effort of a want to satisfy itself in a definite manner, effectuating itself by a complex of references to past, present and future. If we look at these references, any one of them,

e.g., a memory judgment, is again a correlation of present and past, so that the correlation into which we analyse purpose may and usually does involve constituent correlations. Some of these, *e.g.*, recollection, may themselves be purposive, but many are not so. Thus the perceptual judgments which form our view of the concrete situation from which a simple purpose starts, rest on relations between present stimuli and past occurrences, in which the past occurrences are not ordinarily objects of thought at all and no effort is made to recall them. They have affected the mind so that some special combination of actual stimuli presents itself without the need of any effort, as, *e.g.*, the pen which I can use in the service of my end in writing these lines. There is a correlation of my experiences here, but what we ordinarily call an unconscious correlation (that is, one in which the terms are not objects of distinct reference as they are held to be in the purposive activity as described above). Thus purposive correlation has its material largely furnished by unpurposed correlations of experiences, and when we come to what present themselves to us as relatively simple objects such as the appearance of this sheet of paper to my vision, physiological analysis indicates that here, too, there is a combination of very numerous stimuli into a whole. Lastly, our emotions involve on the one side complexes of physiological processes, and on the other effects of past experiences and references to other existences or to ourselves as permanent beings, or to possibilities of future occurrence. This correlation underlies or goes to constitute or is from time to time effective in sensation, emotion, perception, memory, judgment, inference, purpose and *à fortiori* in combinations of purposes, the recognition of the enduring and the changeable, of a world and of ourselves playing a part within it; that is, in all that we sum up in the word Mind. We can consider correlation as a generic character of mental action, within which we can distinguish specific types, and in particular

can consider how far the various unities which it forms extend and how far they are in turn correlated into wider unities and approximate to a unity which should be co-extensive with the entire operations of Mind.

In the comparison of the various forms of correlation, purpose is the critical phase, for it is here that we all recognise in our waking moments that an assignable mental act or resolve is the indispensable condition of the events which follow. The purpose as such, however, is not self-explanatory. It is founded on a want which it does not create. True, the want may arise within a wider purpose, but this in turn will require explanation, and the plain man will admit that if he can be said to want anything there must be some things that he wants for themselves as ends and not as means. Having specified this the plain man will stop, but the philosopher goes on, and he will in particular regard any given want as one among others with which it may harmonise or may conflict. The conflict opens the prospect of mutual frustration, harmony a possibility of fulfilment of life as a whole, and since each individual stands in multitudinous relations to the world and in particular to others or to society, the correlation of all the parts of this vast complexity is the goal here indicated. The systems of life which men have worked out in ethics and in religion are attempted definitions or approximations to such a correlation, success in which must depend on getting down from the felt urgency of the particular want to the inexpugnable underlying needs of Mind and the discovery of the lines upon which they may attain harmonious fulfilment. Even if this conception is no more than a regulative idea we may use it to complete our standard of measurement, and we can gauge the development of Mind by the advance in the correlation effected from the sub-purposive beginnings to the systems of life in which our ordinary purposes find their meaning, their correction or their inhibition.

In this advance there are in fact several fairly well-marked turning points at which correlation takes a new turn, or, as Professor Lloyd Morgan would say, there is a new and specific relatedness among elements in which a higher type emerges. Of these the most critical is the emergence of purpose itself which imposes a special form of interconnection upon impulses, perceptions, judgments, etc., which brings them into co-operation in a new manner. But below the level of purpose there are, for example, sensori-motor combinations which do not appear to require ideas to affect them, and above the first formation of purpose are the correlations which effect the conception of personality in others and in self, together with the distinction of the general and particular, the permanent and the occasional. Above these, again, are the systems resting on criticism of such ideas and of all spontaneous processes or products of Mind. I would not attempt a summary which in this place must necessarily be too bald to be of interest, but would merely indicate agreement with Professor Lloyd Morgan's view of emergence in Mind, with the reserve that what he calls relatedness I describe as correlation, and by that I mean to emphasize that it is definitely the work of mind, and that the whole which it constitutes does not in any sense run parallel to the parts, but modifies their behaviour in a determinate way.*

Regarding correlation by Mind thus generally we may describe it as the determination of events by the requirements of the whole which they form. We have now to ask whether such correlation is achieved without mind. Correlation of a kind is the general object of scientific investigation. In all fields we find that one thing is constant while another is constant or varies

* It is on this point that I feel some doubt about Professor Lloyd Morgan's meaning, at least as concerns the relations between mind and body.

when it varies, and it is in general our aim to formulate the laws of such variation. But this is not to say that the things in question form parts of a specifiable permanent structure unless it be that of the universal whole. Still less that they are determined by the requirements of the structure. Let us look at the structures which we suppose to be mechanical, as contrasted with the mental, and let us take first the man-made machine. Here we certainly have a structure and parts correlated in our sense, that is, each part is made to perform a function in the whole. But this is precisely the Mind's work. The success of the machine depends on the fact that while each operation is the conjoint resultant of the constellations of forces acting at each moment, these have been so arranged that, moment by moment, they follow one another in a prescribed course to a pre-assigned result. If the calculations are correct and no unforeseen force impinges, the result actually comes about. But the machine has no power of adapting itself to an unforeseen* contingency or of varying its course in a manner better suited to the result. It is by such adaptations that purposive action betrays itself; for the machine the path is fixed, but not the goal; for purpose, the goal, but not the path.

If we consider structures not made by man, solid bodies or the solar system or a molecule or an atom, we have systems undoubtedly maintained, perhaps over vast periods, by the continuous behaviour of their constituents in an ever-recurrent cycle or rhythm, or possibly in cycles which admit of certain definite changes without destroying the system as a whole. Here the system may undoubtedly be said in a sense to determine the action of each part in such a way that in the absence of the impact of an external force the structure is maintained. Yet

* For foreseen contingencies, secondary mechanical appliances may of course be devised.

each constellation of the parts gives rise in rigid uniformity to the next in order, and if in the movements and changes of things the system comes within the influence of an outside body, the changes resulting in accordance with the uniform laws of the factors that now come into account may modify or break the system just as inevitably as those previously operating conserved it. Thus, however the physical structure may be constituted, its behaviour is not determined by the requirements of its maintenance as an enduring whole, but at any moment follows from the sum of pre-existent factors, whatever the result may be.* Thus, while structures are formed, and maintain themselves and even (like crystals under certain conditions) grow on mechanical methods, they grow out of an antecedent collocation in which there is no directive factor determining the behaviour of each element in accordance with its bearing on the formation and maintenance of the whole. There is no factor which as such

* In general, the simplest and most easily available evidence of mechanical behaviour is that the action of any part of the whole is to be explained by the forces immediately impressed on it, and is therefore in principle independent of its bearing on the whole. This view is not affected by the relativity theory, except in the form of statement which must dispense with the term force. In substance, the theory rather emphasizes the independence of each part in respect of anything but the medium directly continuous with it. But some doubt of its universal applicability is suggested by the Quantum theory in accordance with which certain changes in the structure of the atom take place suddenly and as a whole. Here the separate electrons do not appear to be independently shifted, but fall simultaneously from one orbit to another. Apparently we touch a real limit of divisibility in physical process—an "all or none" alternative. Whether we are here in the presence of a conception which will altogether undercut the mechanical as hitherto conceived in the innermost recesses of the atom I have not skill to discuss. At the utmost, though the constituents of the atom in spite of their plurality act as a unity, it is not, so far as I know, suggested that they act otherwise than in response to the conditions of the moment, i.e., unaffected by any consequences. But here lies the real definition of purpose.

makes for correlation,* and hence, like Mind, can extend its correlations indefinitely.

The question of the physical organism is more difficult. Here we have (1) an astonishing complexity of parts so arranged as by combined action to secure the continued life of the whole and the propagation of the race, and (2) a system in which *prima facie* the parts do not act altogether with machine-like uniformity but with some variation which is normally adapted to changes in the requirements of the whole. As to (1), the natural man's interpretation is quite correctly given by Paley. Perhaps the real difficulty is to imagine a Mind which could make us living beings so well and not make us better. We might believe that infinite wisdom could accomplish the work of creation in six days, but we cannot believe that on the seventh it would rest on its labours and pronounce the results as they stood to be good. We would rather imagine it reviewing a stupendous effort which, just missing success, had landed in tragic failure. We cannot, in fact, think of the world as the work of unconditioned purpose. The alternative evolution theory gave us partial explanations with the hope of more, but it cannot be said that the modern study of heredity has at all lightened the task of ultimate explanation on any lines which exclude the operation of Mind in the process.

If before discussing this point we turn to the existing organism as a going concern, the prevalent impulse of science is resolutely to exclude all but mechanical considerations. How far this

* It might be suggested that what, in old-fashioned phraseology, were termed the centripetal forces in a system are those which hold it together, and may therefore be regarded as having the specific function of maintaining structure in reality. If, however, we suppose these forces to act alone, the system would collapse upon its centre, and the centre *per impossibile* into a point. We are, in fact, landed in a contradictory conception, unless we think of the system as a balance of diverse factors.

tendency can be carried over the lower regions of life, it is not for the philosopher to determine. But two things he must say : (1) Man can act purposively, and purposive action is the antithesis of the mechanical. No less certainly the human organism in many operations behaves mechanically. To attribute the difference to Mind as a separate quasi-substantial unity within the body as a separate entity is to go outside the facts, to state a problem of interaction in terms which make it extremely difficult if not insoluble, and to leave the sub-purposive region unexplored. The simple and frank way of putting the facts as we know them is that the human organism behaves intelligently, purposively, on a principle of correlation of details into systems ; and it also behaves like physical matter—measurable, ponderable, with parts interacting as the measurable and ponderable interact elsewhere. Both attributes or relations of attributes characterise it in its totality, and in its totality its behaviour is not intelligible if either of them be excluded. In so far as the mental is developed, it dominates by correlating the constituent physical processes ; in so far as it is undeveloped, they have the upper hand, and such unity and correlation as it induces are partial and indirect. But even in its sub-purposive forms, *e.g.*, in instinctive adjustments, it is vigorous enough to induce departure from the simple type reactions which characterise the machine, and though we certainly cannot think of an ordinary physiological process as purposive there is no *a priori* reason for excluding it altogether from the sphere of mental activity. The proof must lie in actual experiment, which must decide whether any given organic action is determined by structure antecedently fixed or exhibits novel adaptations to special requirements which are the mark of an active and original power of correlation. Analysis of mental operations will show us that such power must be carried down a good deal below the plane of deliberate purpose, but how far it is to go cannot be determined by analysis alone. In the behaviour

of the organism as a whole, the evidence goes to establish the probability that mental correlation must be carried down to the protozoa.

(2) So far as we repudiate mental correlation we must regard the organism as a combination of mechanical processes. No intermediate has been satisfactorily defined. The organism must be compared to an elaborately designed machine; if a designer is denied, there remain only combinations of mechanical processes to produce the design. Now mechanical constellations may engender durable, inanimate structures, when in the course of their interactions they reach a posture in which a number of elements are in balance. We cannot say definitely *à priori* that they might not, through some vast complexity of combinations, produce a structure maintaining itself by changes adapted to its changing requirements, as a living being, but any adapted action not involving Mind rests on pre-formed structure, and in general pre-formed structure yields type-responses like a machine. Again it is impossible to deny that some particular combination of circumstances might throw up some novel adaptation which would happen to fit the case, but the only standing cause of novel adaptation that we know is purposive or sub-purposive activity, and where we find such an adaptation the normal feature of life we impute such activity, and are upheld in so doing by the general consistency of our explanation with the facts. As to development, development within mind occurs under our eyes in every human child. Development of Mind from anything which can with certainty be described as purely mechanical is unknown. I would not here discuss whether its possibility or its impossibility can be demonstrated, but content myself with pointing out that so violent a discontinuity in causation demands strong specific evidence to establish it, and that such evidence is entirely lacking. In any case, we must remark that all standing power of correlation in the organism not originating from the

mental factor throws us back on antecedents and phylogenesis for its explanation.

Thinking of Mind not as an incorporeal entity but as a factor operating in organic life, we may recall how many years ago it was shown by Professor Lloyd Morgan and others that on any theory of heredity it must be a factor operating in racial evolution in a measure proportioned to its own development. It is here that the main significance of evolution lies and that the greatest changes yet await us. Mind in the completeness of its expression is no doubt at the end rather than the beginning of evolution, and yet we cannot think of such little sparks or seed of soul as there may be in the protozoon as its ultimate source. In all our efforts after knowledge we seek a common ground of things different, and unless the principle is utterly illusory we must suppose some ground of the actual structure of the universe. Such ground is not mechanical, for though we may explain how a mechanical structure arises, our mechanical reasoning starts from a constellation taken as given. If we seek the ground we must sooner or later come to a factor of correlation, that which fashions parts into a whole, and this is generically the function of mind. The alternative (if we bear in mind that, dealing as we are now dealing, with the system of reality as a whole, we cannot look beyond it for further combinations of causes to explain its genesis) is to conceive the elements of the real as building up a system by their intrinsic nature. In a sense, since we think of Mind itself as an element in the real, this is not an alternative but equivalent to the view already taken, but if we ignore the difference between this factor and others, and suppose the system to grow out of elements with the systematising factor omitted, we are imputing a perfectly harmonious character to all elements of the real alike, and are thus in effect regarding all reality as a sort of super-organism, which is incompatible with the facts of mutual conflict and disruption. Such factors are

equally incompatible with the theory of an unconditioned mind, creating the universe out of nothing or freely stamping an indefinitely plastic material with its ideas; but they are not incompatible with a conditioned teleology, in which the factor of inter-connection among all elements is conceived not as something changeless or as a merely passive result of the actions of the elements, but as something conative, conditioning their relations and changes at the same time as it is conditioned by them. I cannot here attempt either to present the reasons that may be given for or the objections that may be brought against such a conception. I must restrict myself to the contention that a conditioned teleology is (a) free from the objections that are fatal to the doctrine which makes reality spiritual through and through; (b) does not abandon the explanation of all structure to the infinite mechanical regress, but rather supplies to the mechanical the necessary complement of that which holds it together in concrete reality; and (c) in conceiving Mind as a permanent and inherent element in the real, enables us to refer its development to the drive of its inherent conative energy. What "emerges" in evolution is the succession of systems which Mind as a correlating factor among all elements of the real and ever conditioned by that relation is able to effect. If in these systems the purposive factor grows in definiteness and therewith the system widens its scope, this is due to the cumulative effects of a factor consistently seeking expression through the control of limiting conditions. Though not unconditioned, this factor is a conative or hormic principle which grows as it acts, and even, we may venture to say, learns through error, and thus, though its task is infinite as reality, it pushes its way towards harmony through the maze of evolution.

II. *By J. A. SMITH.*

It is the business of the later writers in a Symposium, as far as they possibly can, to follow the lead given by the first, and this I hoped here to be able to do. If I have failed to do so, the fault is doubtless mostly mine. I can only plead in extenuation that much of Prof. Hobhouse's language, even some of the words or phrases which appear to him to be current in "our ordinary" use, is unfamiliar to me, and I have not been able to make my own the senses in which he employs them from time to time. I attempt here to restate what I take to be his doctrine in terms which seem to me simpler, but I am uneasily anxious that I may be misreproducing them or even misrepresenting them, though I have tried in my own interest not to do.

There is not much, if any, ambiguity about the question he proposes, viz., What Mind is, or what Mind does? He points out that the asking of these questions presupposes that we have already answered certain other questions, the answers to which are assumed (treated for the time as settled and out of debate). But I think he has not called attention to one of these, an alternative answer to which is assumed in the very title of the paper. The assumption is that Mind has a place in Nature (along with what is not Mind or not Minds); were this not assumed, the question, What is that place? would have no meaning. As I am not persuaded that there is any place (whether to be called "Nature" or not) which could truly be said to be co-occupied or co-inhabited by minds and non-minds, I am in a difficulty from the outset. But I do not here propose to raise the question of the validity of this assumption. All I wish to point out is,

that the whole discussion proceeds on the hypothesis that "the doctrine which makes reality spiritual through and through" is mistaken, the falsity of it assumed to be beyond question.

"Nature" is taken to contain, and to present to us, indubitable evidence of its containing two different kinds of entities, each doing different kinds of things, each having its different characteristic and peculiar ways of behaviour, products, results, etc. Or at least this is true of one of the two kinds, viz., Mind or Minds. Or still rather, we are to inquire *whether* this is so, whether there is "any form of behaviour" which is (a) characteristic of mind in general (*i.e.*, I suppose, always found where Mind is or acts), and (b) peculiar to Mind (*i.e.*, always absent where Mind is not or does nothing)? But I have no doubt that Prof. Hobhouse hopes to discover not only *whether* there exists such a universal and peculiar or exclusive characteristic of Mind, but *what* it is. I am puzzled by what he enumerates as a third condition (c) of this object of search. We shall not have found what we are looking for unless what we have found is "such that specific differences within it serve as a good basis for the comparison of different forms of mental activity." That is, "the form of behaviour" characteristic of Mind in general and peculiar to Mind must have within it specific differences (sub-forms of behaviour) which will in some way assist us to compare (I think this must mean "to distinguish") different forms of mental activity. I am not sure whether "the different forms of mental activity" here are or are not the same as "the specific differences within" the form of behaviour, and so I am regretfully obliged, for lack of understanding, to ignore (c), or to construe it as meaning no more than that the *quaesitum*, if discovered, shall be such as to enlighten a wider field than on its first appearance it seems to do.

[As nothing can have specific differences within it except a genus, it looks to me as if Prof. Hobhouse regarded Mind as a genus and "the form of behaviour, etc.," as a generic character..

This would seem to carry with it that there are in Nature species of minds each characterized by one of the specific differences. Or is the meaning that the different forms of mental activity are the reproduction within individual minds of the specific differences within "Mind in general" ?]

In any case, I am somewhat surprised to find in what immediately follows what looks like an equation of "man" with "Mind," the work of the one with the work of the other, and consequently what we observe in ourselves of the work or working of our nature used to supply an answer to what Mind is or does, though on looking back I see that Prof. Hobhouse justifies this (or assumes its justification). I do not, however, understand what in that case can be meant by "Mind in Nature" as distinguished from "Mind in Man." Indeed, it now appears to me that I have misconceived Prof. Hobhouse's question, and that what he is asking is really what is universal and peculiar to Mind as it is found not only in man (or in us) but elsewhere also and so "generally." I should be glad if it proved that I was right in this interpretation of his question. On it I should understand him to be assuming that what we call Mind occurs or is to be found existent and at work as well with in what we distinguish from Man and call his environment (or sometimes "nature") as in ourselves, though not perhaps everywhere in that environment or there as clearly and distinctly or unmistakably as in ourselves. I am certainly in no way averse from acknowledging that this may be so, and, indeed, I regard it as at least a highly promising working hypothesis, in spite of the obvious abuses to which it is exposed. Cautiously employed, I think its utility not easily exhausted. In fact, I should extend its reach even beyond where perhaps Prof. Hobhouse would consent to go, and could scarcely limit its range at any circumference within the content of our experience. I do not see where or on what grounds we can set bounds to its pervasiyeness and power.

But, just because this is so, what I take to be his method of attempting to determine what Mind is and does, everywhere where it is at all or does anything, seems to me defective. My objection is to it as being what I think its practitioners would characterize as "empirical" or "*a posteriori*." It does not matter in the least whether the relevant facts are obtained by introspection or extrospection, or both together. In either case, from data thus obtained we are to proceed towards an answer by an elaboration of them through abstraction and generalization. It is my considered conviction that this method is quite blind except in so far as it is conducted in the light which comes not from such data but from another source, whether that source be within or without the minds which profit by it. In other words, I believe that we start with an understanding of what Mind is and does which is not derived from experience, though its beginning does not antedate the origin of experience and though its development proceeds concurrently with the advance of experience. Since Descartes at least this alternative method of procedure has been frequently set out, and I am not prepared at any man's bidding to disable or forsake it. My belief in its feasibility and indeed indispensability in no way requires of me to depreciate the value of the other, and I regard them not as "mortal opposites" but as natural allies. What I find in Prof. Hobhouse's paper is an attempt throughout to combine both in a forced and, to me, obscure manner. If I understand his suggested conclusions, out of which we are to gather his provisional answer to his own question, what Mind is and does (everywhere and always), they seem to me to amount to this, that it is what it is and does what it does, under conditions foreign to it, limiting its free existence and operation, conditions set or provided by something else than Mind—some factor in reality heterogeneous from Mind.

The latter, in its nature operations and results, is "mechanical": the former—which is Mind—is purposive, conative, "hormic,"

etc., it "grows as it acts," it "learns through error" and pushes its way through the maze of evolution (which I presume is the work of the other factor) towards harmony. I find this account of the situation, while perhaps sufficient as a provisional basis for science and psychology, unacceptable and indefensible as philosophy. I believe it to be irreconcilable with that non-empirical knowledge of Mind's being and working to which I have above referred, a knowledge which I feel sure that all men or minds, including Prof. Hobhouse, share with myself. It is a knowledge which he will not acknowledge himself and others to possess, or, rather, as I see it, he coquets with it while declining to embrace it, standing with reluctant feet on the brink of its health-giving waters. It haunts him like a ghost and he can get on neither with nor without it.

The concluding passage of his paper presents a view which is frankly offered to us as a "contention" or thesis without reasons for it or examinations of objections to it, and I can only conclude (with a similar restriction or self-denial) by saying that to me it is a view essentially distorted, erroneous and misleading; in fact, a misview of Mind's place in Nature, of the whole situation in which Mind is all-pervasive and omni-operative.

III. *By* G. C. FIELD.

I MUST begin by apologizing for this paper. It has been written under conditions of Time and Space which have made necessary a much more hurried and perfunctory treatment than such a subject deserves. Further, the whole of it was planned and the greater part of it written before Professor Smith's contribution came into my hands at all. There was no time to re-write it, and consequently I have had to confine myself almost entirely to a consideration of Professor Hobhouse's contribution.

I believe that I can accept without difficulty the starting-point of the discussion suggested by Professor Hobhouse. It seems clear that if we are to attach any meaning at all to the terms we use, we must start from a consideration of Mind as we know it in ourselves. Our first notion of Mind is of something that we know of in human behaviour. It is a particular characteristic or set of characteristics that belongs at any rate to some kinds of this behaviour. Whether it is more than just certain characteristics—whether, for instance, it implies a substantial entity called a Mind in the beings which display this kind of behaviour—is a question that can only be considered properly at a much later stage of the discussion. Further, each individual knows certain of the characteristics which we call Mind or mental in his own behaviour in a way in which he does not know them in the behaviour of anyone else, and he has, or believes he has, a certainty of their presence in his own case which he cannot have in the case of others. And it is those particular features, that we know in this way, that we regard naturally as the most essential features of Mind or mentality. So that if, at this level, we raise a question about the presence

or absence of Mind in a particular object we think primarily about the presence or absence of these particular characteristics. In other words, we do not mean to ask, in the first place, whether the visible behaviour of the object is of this or that kind, but whether it has behind it the same experience of thinking, feeling and the like which we have.

This may seem an elaboration of the obvious. But I think it necessary to attempt to reach some basis of agreement about what we are to start with. We may, of course, move far away from our starting-point. But if we hope to get others to follow us, we must indicate the path by which we have travelled. From that point of view, I would suggest, in the first place, that the question would not be worth raising at all unless we were envisaging the possibility, in raising it, of the characteristics of Mind being present in places or in events in which we do not naturally or obviously assume them to be. We mean by Mind certain characteristics which we find in the first place in human behaviour. And, of course, human beings are a part of Nature, and affect the behaviour of the rest of Nature in certain ways which are perfectly familiar to us. But to start a philosophical discussion about Mind's place in Nature takes us beyond this, and raises the question whether these characteristics of human behaviour are not also characteristic of other occurrences in Nature.

If we are going thus to extend the sphere of the workings of Mind beyond the limits that we naturally assign to it we could, so far as I can see, approach the task from either of two possible directions. We might say that the characteristics that we observe in certain occurrences in Nature afford a fair basis for inferring that the other characteristics, which we take to be most essential to Mind, are also present, though we cannot directly observe them. The simplest kind of instance of that would be if we thought that the observable behaviour of some

particular natural object was such that we could believe that it thought and felt in the way we do ourselves. On the other hand, we might argue that the characteristics that we generally consider to be most essential to Mind are not really so, but merely a consequence or one manifestation, even an accident, of some more essential characteristic still, and that this latter was to be found in other occurrences besides the behaviour in which we usually find it. As an instance of this approach we might take the contention of Idealists like Bosanquet that the essential nature of Mind is to be an "explicit unity," a whole as opposed to the fragmentariness of its object.

Which line of approach is followed by Professor Hobhouse? I confess to being not quite sure. But I think that he inclines towards the former alternative. This correlation or "determination of events by the requirements of the whole which they form" is, I take it, regarded as a sign or symptom of the activity of Mind, and, in his final conclusion, of nothing else. But it is not the essential nature, the definition of Mind. Otherwise there would not be any meaning even in asking, as he does, the question whether this correlation occurs without Mind. What, in his view, the most essential attributes of Mind are, which he infers from observation of this correlation, is not so clear. If we are to hold to the principle first laid down and start from our knowledge of Mind in ourselves, the tale of these essential attributes must at least include a reference to the unique quality of consciousness. There may be—indeed, there clearly is—much more than that implied. Thus there is probably contained in the most elementary idea of Mind some notion of correlation and system, of which what we call purpose appears to be the fullest and most typical manifestation. Desires, emotions and thoughts are correlated to form a purpose, and different purposes are correlated together into a wider purpose. But these are correlations of conscious elements. And unless

at some points we can discern the presence of this quality of consciousness, we should need a lot of persuading before we could attach any meaning to speaking of the presence of Mind.

If we are still working along this line, we see that one form in which the question can be posed is this: When does the observation of a correlation of physical events to produce a result justify us in inferring the existence of a correlation of conscious events into a purpose? That we often do make such an inference is clear. Some have thought that we make it whenever we ascribe mental processes like our own to other human beings, whose structure and behaviour resemble ours. This point is worth discussing a little further, because it would certainly throw some light on the matter if it could be shown that the same reasons which lead us so confidently to ascribe minds to other human beings would apply just as cogently to other cases. The whole idea that our certainty of the presence of Mind in other people is an inference from analogy with ourselves has been attacked by Professor Alexander and other writers. And I think they have been successful in showing that such an explanation is certainly inadequate by itself. On the other hand, there seems also a certain inadequacy about the alternative explanation. Professor Alexander finds the real basis of our certainty of other minds in the experience of social feeling and sympathy. There can be no question that this plays an important part. I should agree that this experience is, at any rate, the chief influence in leading us to the general conviction that there are such things as other minds. But, even if it is a justification as well as a motive for arriving at this general belief, I do not see how it can be used as evidence to decide particular cases. If, for instance, we were in doubt whether a figure that we saw was a waxwork or a human being, we should not attempt to decide the question by examining our own emotions towards it. Still less should we use this as

a test if it were a question of a whole group of phenomena, other than the observed movements of human bodies.

A typical instance of this last situation would be the question of the flint implements of which Professor Hobhouse speaks. Here is a clear case in which we raise the question, to which we are at least able to attach some meaning, whether a certain group of facts are due to the activity of Mind or not. But we do not infer our answer to this question merely from a consideration of the general characteristics of the objects under discussion. It is not, I suggest, the mere fact of "correlation of parts within a whole" which justifies us in inferring the activity of human minds. There are several other considerations to be brought in, and above all the fact that we know from experience that the particular need for which the objects appear particularly suited is a common need of human beings. We know that we often want to cut, and that we devise instruments with some points of resemblance to the flint knives in order to carry out this purpose. I do not believe that we should feel justified in inferring human agency except from our empirical knowledge of the actual purposes for which human beings do devise or have devised instruments of this kind. It may be said that human activity is not necessarily the only possible form of the activity of Mind. But that is just the difficulty. If we need so much knowledge in order to infer the activity of human beings, about which we know a good deal, how much knowledge must we have to infer the activity of any other form of Mind about which we cannot know nearly as much?

To apply these considerations to Professor Hobhouse's general contention. He maintains, if I understand him rightly, that the facts of organic nature, both in the behaviour of individual organisms and in the development of races and species, show, as the facts of inorganic nature do not, the kind of correlation which justifies us in inferring the activity of Mind. They do

not, however, on his view justify us in regarding Mind as solely responsible for the result. And so we are led to the view which he describes as a "conditioned teleology." This is a view which, as far as my personal feelings go, I find attractive. It certainly avoids various difficulties, and it does not lack weighty support. Thus, in a different form, it appealed, if I interpret him aright, to the great mind of Plato. But, for all that, I find that the positive reasons which have so far been advanced in its favour lack cogency.

Professor Hobhouse's argument is, in summarized form, that the processes of organic nature show a kind of correlation that cannot be explained as the work of pure mechanism. Mind is the only agent that we know of that produces this kind of correlation, and it is therefore a reasonable inference to trace the working of Mind throughout the organic world. This argument is open to attack from many sides. I believe the majority of biologists would agree with Professor Hobhouse's view that the behaviour of the organic world cannot be explained on purely mechanical principles. But there would be a vigorous minority which would not accept it. From another side a similar attack might be delivered by asking whether we knew so much about what we meant by mechanism that we could say with certainty that it could not be applied to this or that. Here, again, I think that I should sympathise with Professor Hobhouse rather than with his assailants. But the point that I should select for attack would be the argument that if it is not the work of mechanism, it must therefore be the work of Mind, because "no intermediate has been satisfactorily defined."

The effect of this argument appears to be this. Vital processes show characteristics which are different from anything that we can discern in mechanical processes and cannot be reduced to them. These characteristics are also to be found in what are admittedly mental processes or the results of mental

processes. We are therefore to infer the presence of the other, and more essential characteristics of mental processes. There does not, however, seem to be any necessity for this inference. If we ask why these characteristics—which we may call for convenience vital characteristics—cannot come into existence without other characteristics—which we call more specially mental—the only answer given is that they are different from and cannot be the consequents of mechanical characteristics. But this is not sufficient unless it is also proved that they cannot exist in their own right—in just the same way, whatever that way is, as mechanical and mental characteristics. We appear to discover them by observation in the same way as we discover the mechanical characteristics of inorganic matter. Doubtless we know less about them than about the mechanical characteristics, and the knowledge we have is not ordered in the same degree. That may be the reason for the constant effort to reduce vital characteristics to mechanical characteristics. But, if the observed facts forbid the reduction, there does not seem any necessity to plunge to the opposite extreme and reduce them to mental characteristics. Why not follow what our observation tells us and accept them at their face value as an order of qualities of their own? Why should not Life be an emergent characteristic intermediate between mechanism and Mind—something more than the one but not necessarily identical or bound up with the other? The general line of argument that is here criticized is but one instance of a whole class of arguments directed to extending the place of Mind in Nature beyond the sphere to which our ordinary ideas assign it in the activities of human beings. Thus we find Plato referring to Mind all change and motion in the physical universe, because he could not see sufficient ground for any particular change taking place, either in the nature of the Forms or in the nature of Space, which was the matter out of which the physical Universe is constituted. Or, to take a thinker of a very

different stamp, we find Von Hartmann in his advocacy of the Unconscious constantly arguing that some form of the behaviour of an organism cannot be explained on mechanical principles and must therefore be the work of Mind, and, as it is not conscious, it must be the work of unconscious Mind.

The assumption seems common to most of these views that mechanical or mathematical characteristics—the two are not really distinct—and the characteristics of mental processes are alike intelligible to us, but that no other characteristics are. And, therefore, if we think that we observe such other characteristics, they must be reduced to manifestations of one or other of these two. This assumption we shall find appearing in many forms: for instance, it helps to explain the readiness with which many people accept the view that secondary characteristics, in so far as they are not reducible to primary characteristics, are “in the mind.” There is no space to discuss at length the arguments with which the assumption might be justified. I have only attempted above to indicate the points to which its advocates must direct themselves if their position is to be established. It remains to point out that views have been held according to which, if we apply the test of intelligibility, we find ultimately that there are not two intelligibles but one intelligible. And so we get, on the one hand, the attempt to reduce Mind to a mere epiphenomenon of mechanical processes; and, on the other, we get the views which reduce mechanical processes to the work of Mind. These latter, in their turn, appear in two main forms. In the one—which has been held by many great physicists—the ultimate explanation of mechanical processes being what they are has to be looked for in the will of God or some such final cause. The other view would make not will or purpose but knowledge and thought the most typical activity of Mind, and would regard the laws of mechanics themselves as knowledge and therefore the work of Mind. This last line of argument

would, I imagine, be that which would appeal to Professor Smith. But we shall be wise to pause here before we are plunged into the whole controversy of Realism and Idealism. I will only say that, for myself, I accept fully the main Realist contention that the activity of human knowledge implies, in its nature, an object other than the knowing of it. And from this it follows that it is not possible by an analysis of the activity of knowing to discover the truth about the nature of what is known. Not by this path can we arrive at any satisfactory conclusion about the place of Mind in Nature.

The discussion all goes to show that the central point on which it turns is the question what we regard as the distinguishing and essential characteristics of Mind. And by way of conclusion I may summarize the view that I have here adopted. In the very notion of Mind, as I understand it, there is implied order, system or correlation. But that is not all. Equally essential is it that the system should be a system of elements of a certain kind. It could not be thought of as a mental system or mind at all unless it, at least, included elements which had this unique quality which we call consciousness. Whether any other elements than conscious elements are necessarily included is a question for discussion elsewhere. But the presence of these conscious elements is essential. In Fact and in our experience we always find these conscious elements together with elements of a different quality—which we call physical—of which the most obvious case is the bodies which are animated by our minds. Either group of elements, considered by itself, forms some kind of system, and the two together form a joint system of mind and body or an animate organism. And, of course, they can enter into wider systems still.

The question, then, presents itself, how far are the different and distinguishable elements in these systems necessarily connected, so that wherever we observe one group we can be certain

that the other is there also ? And my contention is that there are few, if any, cases in which we can see by an examination of what we know of the nature of one group of elements that it is necessarily connected with another group, so that it cannot conceivably exist without it. The greater part, at any rate, of our knowledge on these points is empirical, consisting in inferences based in what we know to have happened in fact hitherto. Thus, we believe the flint knives to have been the work of minds like our own, because we know in fact that human beings do require and do make instruments of this kind, and we have not as yet discovered a clear case of instruments just like these being produced by other agencies. It is because we already know a good deal about human beings and what they do that we can infer their activity in more doubtful cases. Such an inference becomes less certain the less we know about what has already been produced by the mind whose activities are in question. And when it becomes a question of inferring from any group of phenomena the activity of a mind of a very different order from our own minds, while we have no other indubitable instances of the action of such a mind on which to base our inference, then the force of the argument seems to me to approach zero. To put the point shortly with reference to Professor Hobhouse's own argument : I cannot see anything in what we know of the general processes of organic nature to make us believe that they must necessarily, of their own nature, be associated with other processes which we call specifically mental. And inference from experience could certainly not prove such a belief, and indeed, as far as it goes, would rather tell against it.



SYMPOSIUM:—THE NATURE OF SENSIBLE APPEARANCES.

By G. DAWES HICKS, H. H. PRICE, G. E. MOORE
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I. *By* G. DAWES HICKS.

I AM going to confine the following paper to a discussion of the theory of *sensa* in the form in which it has been presented by Dr. C. D. Broad in his two recently published volumes.* It is an immense gain to have the theory exhaustively worked out in detail; and, although I am destined to play the somewhat ungrateful rôle of a critic, I have no other feeling than that of unbounded admiration of the extraordinary thoroughness and care with which Dr. Broad has fulfilled his task. He has supplied us with a model of what a piece of philosophical investigation should be.

One may take for granted that the volumes I have mentioned will be familiar. It will, therefore, suffice to indicate very briefly, at the start, the essential features of the theory, as elaborated by Dr. Broad. In every perceptual situation there are involved, it is contended, states of mind which may be designated "*sensations*." By the term "*sensation*," when employed in this context, we are to understand a complex whole that is analysable into an act of sensing directed upon an object, which may here

* *Scientific Thought*, London, 1923, and *The Mind and its Place in Nature*, London, 1925. I use the abbreviation *S.T.* when referring to the former; in other cases the references are to the latter.

be called a *sensum*. The *sensum* is a particular *existent*, but a particular existent of a peculiar kind. It is not a physical existent; and there is no reason for supposing that it is a mental existent, in the sense of being either a state of mind or existentially dependent on mind. It resembles physical entities, as ordinarily conceived, in having spatial and other characteristics usually ascribed to physical entities; it resembles mental entities in being private to the individual percipient. But, on the one hand, it is not, in any plain straightforward sense, in the one "physical space" in which physical things are supposed to be; and, on the other hand, although not existentially dependent on mind, it may, to some extent, be qualitatively so dependent, and strong grounds can be furnished for taking it to be existentially partly dependent on the position, internal states, and structure of the body. Furthermore, our apprehension of *sensa* is intuitive, immediate; we may make judgments about them, but the act of sensing them is not itself an act of judging. And, finally, it is by the existence of *sensa* and their presence to our minds in sensation that we are led to believe that physical objects exist and are present to our senses. Whatever properties we ascribe to physical objects we ascribe to them in consequence of the properties that actually characterise our *sensa*. So that *sensa* may be said to be in some way the *ratio cognoscendi* of the physical world, while the physical world would appear to be in some way the *ratio essendi* of *sensa*.

1. In dealing with the problem of sense-apprehension, Dr. Board is obviously pursuing the right method in starting from "perceptual situations," as in ordinary experience we are familiar with them, and not from the fragmentary "data" which *sensa* have sometimes been taken to be. Whether or not it be true that for primitive experience the world consisted of "helter-skelter sense-data," which "our savage ancestors in some very remote prehistoric epoch" gradually learnt to collect into series,

and to regard each series as consisting of successive appearances of one "thing," certain it is that *for us* mere *sensa* (e.g., a patch of colour or a particular hardness) are not given at all, but are, at the best, entities which we can only "rediscover" by an arduous process of abstraction. When I look at the table in front of me, however momentary the glance may be, I simply do not *see* merely a "patch of colour." With some little effort, I may limit what I am aware of to a patch of colour of more or less definite extent, which is continuous with what surrounds it, and which consists of parts related to and distinguished from one another. But notoriously the vast number of sensible objects are not of this meagre character. Pre-eminently in visual perception we seem, practically at every moment of our waking lives, to be apprehending *intuitively* and *directly* physical things, each with a variety of properties and of inter-related parts or constituents, and each connected in manifold ways with other things. This "immediate intercourse between the mind and its object," as Hume styled it, seems unquestionably *the* outstanding feature in what we take to be our awareness of external nature. Call it "belief," or a "universal and primary opinion of all men," or what you will, our ordinary thought and conduct are absolutely dominated by it, and were we to begin to distrust it in the practical affairs of life the consequences would soon prove disastrous. Hume thought that the "belief" was "soon destroyed by the slightest philosophy," Dr. Broad thinks that it needs "careful and critical reflection" to realise that it is philosophically unjustified, but both agree that such doubts "vanish at once when we again begin to perceive," and "that then the naively realistic view is reinstated as if it had never been questioned" (p. 242). Now, I am thoroughly at one with Dr. Broad in refusing to recognise that there is anything sacred about "common sense," and I am far from wishing to imply that a philosophical theory is in any way invalidated simply because

it deviates widely from "common-sense" views. Yet, in regard to an overwhelming assurance of ordinary experience such as that in question, I do say, firstly, that we require very strong evidence indeed of its erroneousness to entitle us to reject it as unfounded ; and, secondly, that no theory which involves its rejection can be satisfactory unless it enables us to account for the fact that plain men and philosophers in ordinary life invariably think and act on the basis of a "belief" violently out of keeping with the theory. It will not do, therefore, to dispose of the problem just mentioned in the cavalier fashion it has sometimes been disposed of by describing the common-sense view either as "a piece of audacious metaphysical theorising" which has come down to us from primitive ages, or as due to a "blind and powerful instinct of nature"! And one of the many merits of Dr. Broad's work is that he does not do so. He recognises to the full that we have got to start from the fact that the perceptual situations of ordinary experience do carry with them the claim that their "objective constituents" are spatio-temporal parts of the physical objects which we are said to be perceiving, and that since, as he thinks, this claim cannot be substantiated, the problem has to be faced of trying to explain how it comes to be made and trust in its credentials so perfectly adapted to the practical purposes of human life.

2. Dr. Broad's main reason for holding that what, as he says, "we all believe except when we are philosophising" (p. 249), is to a very large extent false may be stated in a few words. He maintains that although every perceptual situation does claim that its "objective constituent" is a spatio-temporal part of a physical object, yet this claim is certainly false in some cases and extremely hard to justify in any. It is certainly false in delusive perceptual situations. And certain well-established facts render it highly dubious in respect to perceptual situations that are not delusive. Of such facts the following are instances.

The "objective constituents" of a visual perceptual situation will seem to be of different shapes and sizes to an observer who changes his position in regard to what he takes to be a physical object ; while, if two observers, one standing and the other moving about, are looking at what they take to be the same object, the "objective constituent" of the former's perceptual situation will seem constant in size and shape, and the "objective constituents" of the latter's successive perceptual situations will seem to differ in size and shape. And so on. Now, he allows that on what he calls the "multiple relation theory of appearing," it is possible to account for these and similar facts without relinquishing the position that the "objective constituent" is literally a spatio-temporal part of the physical object. I will not go into the details of this theory. I should need to state it in a way somewhat different from the way in which Dr. Broad states it, if I were trying to defend what seems to me a tenable view. I want, however, in passing to refer to the reason which he gives for believing that the balance of advantage inclines "slightly on the side of the sensum theory" (p. 195). The latter does not, he argues, require to assume absolute space-time as a pre-existing matrix, while the former does. The argument, if I rightly understand it, is this. In view of mirror-images, aberration, etc., those who hold the "multiple relation theory" must, it is contended, assert *either* that a single extended particular can appear to be two distinct extended particulars at a distance apart from each other, *or* that sensible qualities and forms appear to inhere not in physical objects but in regions of space. I am far from thinking that these alternatives are exhaustive, nor do I know why the first of them is pronounced to be incredible. But with respect specially to the second I would ask, is it, in truth, necessary to assume that a mirror-image appears to inhere in a space which is physically empty ? No space with which we are familiar is physically empty, nor does it even appear to us to be

physically empty. The space that appears to be behind the mirror is filled at least with air and with the innumerable particles which the air always contains, and surely this would provide substance enough for sensible qualities to inhere in or to appear to inhere in. I fail, therefore, to see that the theory in question does pre-suppose absolute space-time ; and, if it does not, Dr. Broad should be willing to concede that it possesses, at any rate, a degree of probability equal to that of the sensum theory.

3. In working out the sensum theory, Dr. Broad finds himself, however, constrained to depart in several particulars from previous presentations of it, and one innovation introduced by him is of a very significant kind. I refer to his conception of "sense-fields" and "sense-histories." Sensations are, he urges, distinguished by means of the different *sensa* which form their objects, and these *sensa* are wellnigh always outstanding differentiations of larger wholes, or "sense-fields," such sense-fields being, in their turn, parts of longer strands, or "sense-histories." The various special sense-histories—visual, auditory, tactual, etc.—constitute for each individual mind a "general sense-history," which goes on throughout the whole of the individual's waking life, though there may be gaps in any one of his special sense-histories. And the contention is that there is no reason for postulating a special act of sensing for each separate sensum or for each sense-field. On the contrary, the more likely hypothesis would, it is argued, appear to be that at each moment of our waking lives there is a general act of sensing, and that the successive general acts are linked together so as to form a single general process of sensing, this constituting the subjective correlate to our general sense-history which is its object. Furthermore, it is advanced as a probable view that the general process of sensing is kept up by the continuant and occurrent general cerebral conditions, which are involved in being "awake" and "conscious," these being dependent on more general somatic conditions, which

supply the general process of sensing with a continual series of internal *sensa* as objects. Accordingly, the function of the special occurrent conditions (*e.g.*, visual and auditory stimulations) is not to produce acts of sensing but to produce outstanding *sensa* in our special sense-histories, and thus to furnish the general process of sensing with various objects. In other words, stimulation of the special sense organs is purely a bodily affair and does not as such influence the mind : it produces changes in the brain and cerebral system, and these changes generate the special *sensa* (*e.g.*, visual and auditory sense-objects). And the general process of sensing, already permanently provided with a somatic sense-history, is to be thought of as grasping the special kinds of sense-field in its stride, as they are supplied by special occurrent conditions (*S.T.*, p. 516 *sqq.*).

The view, which I hope in trying to be brief I have not misrepresented, has certain points of similarity to Ward's conception of a presentational continuum, and is, to say the least, extraordinarily ingenious. And I am inclined to agree with Dr. Broad that the *sensum* theory, when fully worked out, must take some such form as he has thus delineated. But, at the same time, it seems to me that in attempting in this way to surmount certain obvious difficulties of the theory as it has usually been presented, he is confronted with others which are of a sufficiently formidable kind.

Let us look for a moment at the notion of a "general process of sensing." So far as I can discover the process in question resolves itself for Dr. Broad into a mass of bodily feeling.* Now,

* When a visual, tactual or auditory *sensum* is intuitively apprehended, it stands, he writes, "in a unique kind of relation to something which is not an auditory, tactual or visual *sensum*." And this "something" he takes to be "the mass of general bodily feeling of the percipient at the time" (p. 215). And again he tells us "the *sensum* is apprehended by entering into a certain specific relation with a general mass of bodily feeling" (p. 220).

I am not, by any means, concerned to dispute the contention that running through the successive phases of the mental life there is to be found what may not inappropriately be called a mass of corporeal feeling. I have frequently urged that it is, in no small measure, owing to the presence in the inner life of such continuous undercurrent, if one may so describe it, of feeling that the gradual emergence of self-consciousness, in the strict sense of the term, is possible. For feeling is emphatically the subjective, the personal, factor in our experience; it is, as Hamilton expressed it, "subjectively subjective." But I discern a curious inconsistency in Dr. Broad's use of the term "feeling." On the one hand, he speaks (p. 307) of feeling as a "mode of cognition." And that, I should urge, it never is. We do not apprehend in and through feeling; what is felt is never regarded by us as an attribute or quality of an object. We may, no doubt, in introspection, contemplate, or attempt to contemplate, feeling as an object; but that, of course, is a totally different matter. On the other hand, he strenuously insists that the terms "sensation" and "feeling" indicate two quite different kinds of experience, one of which can and the other of which cannot be analysed into act and object. We talk, as he says, of a sensation of red, but never of a feeling of red (*S.T.*, p. 225). Nevertheless, he proceeds to suggest that "the general cerebral and the general somatic conditions co-operate to give a continuous series of unitary bodily feelings, in which no distinction between act of sensing and sensum can be drawn," that this series of feelings constitutes the somatic sense-history, and that the somatic sense-history is just the "general process of sensing." Accordingly, "getting sensed" may be taken to mean "coming into such relations with the somatic sense-history as to form with it a general sense-history." A sensation of red would be, then, a red sensum so related to a somatic field (consisting of a unitary series of feelings, and forming the subjective factor in sensation) that they constitute together

a general sense-field in a certain sense-history (*ib.*, pp. 522-3). In other words, whereas the general sense-history was formerly said (*e.g.*, *ib.*, p. 518) to be the *object* of the general process of sensing, it is now identified with it.

If the sensing of a red patch be analysable into a red sensum standing in a relation of sensible simultaneity with a mass of feeling, one of two things must, I take it, be true. Either, on entering into the relation, the feeling retains its nature as feeling, and, if it does, there can be no ground for refusing to speak of "a feeling of red," since in that case, sensing must, at least, be a kind of feeling. Or, if a "sensing of red" is not a "feeling of red," the mass of feeling, on entering into relation with the sensum, must lose its character as feeling and become something else. Whichever alternative be selected, the untenability of the position becomes, I venture to submit, sufficiently apparent :—

(a) The sensing of red may be, and I should say undoubtedly is, accompanied with feeling, but the feeling is not identical with the sensing. The latter is an act—an act that involves a faculty, in however rudimentary a form, of distinguishing and comparing. If the so-called sensum be, for example, a red triangular patch, awareness of it implies, *inter alia*, awareness of the plurality and connectedness of its parts, and of its difference from other sensa in the sense-field. The feeling, on the other hand, is not an act, but rather a mode of being affected; and, although under normal circumstances it varies along with variation in the sensation which it accompanies, it may and often does vary while the sensation remains the same.

(b) No less inconceivable is it that, through entering into relation with a red sensum, a state of bodily feeling could be converted into an act of sensing that sensum. For feeling in itself is blind, and it is impossible to see how the mere presence of a red sensum could in itself influence feeling. There would need first to be *awareness* of the sensum before feeling could be brought into relation with it; the sensing is the prior

condition of feeling becoming associated with the sensum, not the feeling the prior condition of the sensing. And I am at a loss to see how the occurrence of this act of sensing is to be accounted for except by supposing it to be incited by the specific stimulation that is transmitted by the optic nerve to the brain.

So far from it being the function of the special occurrent conditions to produce outstanding *sensa* in our special sense-histories rather than to occasion acts of sensing, I have more than once tried to show grounds for asserting the opposite, and, of course, what Dr. Broad names the "multiple relation theory" necessarily presupposes the opposite. To argue the point in a paragraph is out of the question, and I must be content with some cursory considerations. If processes in external physical things and in our bodies jointly produce, as is contended, *sensa*, it would on the face of it seem extremely improbable that the production should take place in, or through means of, the brain. Why, for instance, should it be necessary that, in visual apprehension, the stimulation should have to be conveyed to the occipital cortex? The retina is amply provided with nervous elements; and, if visual *sensa* be the joint product of processes in external physical things and living nervous matter, one would naturally expect that the sense-organ itself would be the seat of their production. On the theory we are discussing, it is hard to make out what possible purpose can be served by the elaborate mechanism through which sensory impulses are conveyed to the central nervous system. If, on the other hand, the function of the special occurrent conditions be not to produce *sensa* but to occasion acts of sensing (or, as I should say, of perceiving), the fact I am referring to becomes, at least, intelligible. For we know, at any rate, that in the human being mental process is closely connected with changes in the cerebral cortex; and it is reasonable, therefore, to surmise that mental activity is directly conditioned by these neural occurrences.

Nor is that all. The intimate junction between the sensory and motor mechanism of the body points to the same conclusion. In the case of vision, for example, what seems to happen when the afferent impulse reaches the visual area of the cortex is not the production of a *sensum* but the transmission of the impulse to the efferent neurones that pass down to join the motor system which causes the eyeball to rotate in such a way as to enable the object to be more clearly seen. Once more, in regard to the suggestion that the "general process of sensing" is kept up by the continuant and occurrent general cerebral conditions which are involved in being "awake" and conscious, I think that if, instead of a "general process of sensing," Dr. Broad had spoken of a general or continuous state of feeling, his suggestion would have had not a little to recommend it. For it seems far from likely that there exist in the bodily organism any nerve structures *especially* concerned in the conditioning of feeling, and there are physiological grounds for suspecting that a continuous state of feeling is kept up by processes taking place, apart from specific stimulation, in all nervous tissue, even that of the spinal cord and the peripheral nerves. But for a "general process of *sensing*" I can find no physiological warrant. Even the vague, indefinite, so-called "organic sensations" seem to be due to special occurrent conditions; the viscera and internal organs of the body are amply provided with nerve-fibres.

I confess that when we are bidden to conceive a "general process of sensing," the notion of "sensing" seems to me to have reached the breaking-point. A process of "sensing" that is capable of apprehending one after another of the innumerable *sensa* which make up our so-called general sense-history, of distinguishing them, of co-ordinating visual tactual and auditory sense-fields, of discerning, in fact, all the various sense-qualities with which we become acquainted in their relation and connexion, would surely be evincing all the powers which Ward

was in the habit of ascribing to what he called the faculty of "attention." In short, I think that psychologically there is a fundamental identity in nature between the simpler activities of mind, those that are misleadingly called "acts of sensing," and the more elaborate activities which we designate "acts of judging."

4. I want next to raise the question whether *sensa*, conceived as Dr. Broad conceives them, can rightly be said to be "appearances of" physical objects. A *sensum* s may, we are told, be said to be an "appearance of" a physical object o if s has to o a certain relation R which it has to no other physical object. And when several persons are said to perceive o , what is meant is that their several perceptual situations contain the *sensa* s_1, s_2, s_3, \dots etc., and that all these have to o the relation R . Moreover, of the relation R we can say (a) that it is not *ex hypothesi* the relation of spatio-temporal part to spatio-temporal whole, and (b) that it is a many-one relation, that is to say, a relation which many different *sensa* can have to one physical object, but not a relation which one *sensum* can have to several physical objects. Further, it is asserted that, on Russell's theory, the relation R is that of class-membership, while on such a theory as Berkeley's it is that of one part of a total effect to the cause of this total effect (pp. 182-3). Analogously, one would suppose that, on the theory before us, the relation would be that of one part of a total effect to one of the joint causes of this effect, although in this case the effect is not, as Berkeley maintained, a mental entity, nor the partial cause as he thought a certain volition in God's mind. But that a *sensum* is related as an effect to something else as a partial cause would surely not in itself justify the description of it as an "appearance of" that something else (and, unless my memory is at fault, Berkeley nowhere speaks of "ideas" as "appearances of" anything). In describing *sensa* as "appearances of" physical objects, Dr.

Broad wishes, I should gather, to imply that physical objects or the qualities of physical objects either are or seem to be manifested to us by *sensa* (see *e.g.*, pp. 242, 250, 296 and 304). And the point I desire to press is that if the "objective constituents" of perceptual situations be taken to be concrete, particular existents, such as coloured or hot patches, noises, etc., which are distinct and separate from physical existents, it is utterly misleading to speak of them as manifestations or appearances of the latter.

The *sensa* which it is claimed are "appearances of" physical objects are, *ex hypothesi*, products generated by special occurrent conditions, *i.e.*, stimulations that originate from extra-organic sources, affect the sense-organs, and are transmitted by specific nerves to the brain. All this is, on the theory in question, admittedly hypothetical—for if there be no way of proving the existence of physical entities (*S.T.*, p. 269), there is *a fortiori* no way of proving the existence of sense-organs, nerve-fibres and brains—but meanwhile let the assumption stand. In what sense, then, can these products be said to manifest or reveal to us physical objects? Clearly not in the sense that they disclose to us the *properties or characteristics* of such objects. The *sensa* manifest such and such qualities, physical objects have altogether other qualities (p. 152); it is the *sensa* alone that are coloured or hot or cold or hard or soft; there is "not the slightest reason" to ascribe so-called secondary qualities to physical things (p. 206). So far, therefore, instead of manifesting to us the properties of physical objects, *sensa* very effectively delude us as to those properties and hide them from us. And even though we grant Dr. Broad's contention, which I am far from thinking he has successfully sustained, that the nature and relations of what he calls the "persistent and neutral conditions" of *sensa* *must* be interpreted by analogy with visual *sensa* and their relations in the visual field (p. 204), still there is equally not the slightest

reason for believing that *sensa* disclose to us the shapes, sizes and positions of physical entities. How could they? Even if it be possible, as Dr. Broad thinks it is possible, to construct a single, neutral, public Space-Time of physical entities and events on the analogy of the many private space-times of various observers' sense-histories, yet clearly the shapes, sizes and positions of visual or tactual *sensa*, as they occur in visible or tactual space, could in no way exhibit the shapes, sizes and positions of things that are not in visible or tactual space, and whose structure is confessedly totally different from the structure of *sensa*. Nor do I see in what way *sensa*, interpreted as the theory requires them to be interpreted, could so much as indicate to us the bare *existence* of such physical entities. Assuming that *sensa* are, as a matter of fact, caused or generated by the action of physical things upon the bodily organism, yet the *sensa* would carry with them no tidings that they were effects of certain causes. And even assuming that any particular *sensum* *s* has, as a matter of fact, to a particular entity *o* a relation *R* which it has to no other physical entity, by what conceivable means could a percipient mind be made aware of the fact? Why, indeed, should a *sensum* not, in truth, stand in a like relation to several physical entities, for evidently several might co-operate in producing it? And, furthermore, if it is to be called an "appearance of" something, why should it not be pronounced an "appearance of" a part of the brain or nervous system, which, according to the theory, would have at least an equal claim with the extra-organic physical entity to be "manifested" by it, in whatever sense it can be said to "manifest" or "represent" anything besides itself?

When, in ordinary language, we speak of the objective constituent of a perceptual situation as being the "appearance of" a physical object, we mean not that it is the appearance which appears but that it is the physical object which appears.

As Dr. Broad himself very fairly puts it, "the object (or, at any rate, a literal part of it) seems to be 'given' bodily"; and the perceptual judgments which we make about it "seem to be 'read off' from the object itself" (p. 248). But I cannot help thinking that Dr. Broad's account of the "perceptual situation" varies considerably according as he is attempting to describe what as psychologists we actually find it to be and what in order to suit the exigencies of his theory it must be. (a) On the one hand, he insists that the perceptual situation is "intuitive" in character, that the object apprehended, the "epistemological object" if you will, is directly and immediately apprehended. He is emphatic in insisting that we do not get at either the nature or existence of the object by a process of inference from the nature of *sensa* (e.g., p. 151), and he further urges that, at the purely perceptual level, we do not have the special experiences called "belief" or "judgment," but simply act as it would be reasonable to act *if* we believed so and so (p. 153). In short, the intuitive awareness which it is asserted we have of *sensa* is likewise the kind of awareness which admittedly we seem to have of physical objects. Indeed, this is an under-statement of the case. For it is acknowledged that, as a rule, we do not notice the presence of *sensa* or their properties at all, unless we specially look for them. The part they play in "our perceiving a physical object" is, it is said, analogous to the part played by printed words on the occasion of our reading a book written in a familiar language. What usually interests us is the meaning of the print, not the print itself, and we do not notice the latter unless there be something peculiar about it (*S.T.*, pp. 246-7).^{*} In other words, the *sensa* serve as "signs" of physical objects, we "use" them in perception, we

^{*} The analogy is evidently imperfect, because the meaning of the print does not stand before us as an object. We should never talk about seeing or hearing the meaning, as we talk about "seeing a table" or "hearing a bell."

perceive "with" them (*e.g.*, p. 298); but, so at least one would gather, they are not themselves the objects which we apprehend. Dr. Broad, in fact, is constantly writing as though he meant that in perception we somehow break through the circle of *sensa* and directly apprehend physical objects. (*b*) On the other hand, however, when we come to closer quarters with the matter, we find that, according to the *sensum* theory, the things which we do intuitively apprehend consist exclusively of "series of correlated *sensa*"; and that, although every one does take the *sensa* to depend on conditions outside the series, no one can be logically compelled to do so (*S.T.*, p. 277). When we see, as we say, a penny, what we really see are visual *sensa*, to which shape and brownness both belong. When we move about and continue, in familiar phraseology, to "look at the same object," we are aware of a series of *sensa*, each having shape and colour, all very much alike in these respects, though varying in certain ways which we commonly overlook. When we touch or feel, as we say, the penny, and meanwhile look at it from various points of view, the series of visual *sensa* is correlated with an invariant tactual *sensum*, in shape very much, but not exactly, like that of most of the former. The tactual *sensa* have coldness and hardness; and solidity is no less genuinely a quality of some visual *sensa* than colour is. In short, all the qualities which we usually ascribe to the penny when we speak of "perceiving" it turn out to be qualities either of *sensa* or of images of formerly experienced *sensa*, and we never really intuitively apprehend anything else.

It may, to use an expression of Bradley's, come from a weakness of the flesh which continues to blind me, but I cannot reconcile the latter account of the matter with the former. If what we are directly apprehending in every perceptual situation be the qualities or properties of *sensa*, then surely it cannot at the same time be true that, as a rule, we use *sensa* merely as signs and do

not notice their qualities or properties. For there would be nothing else that we could notice. The most that we should be entitled to assert would be that we do not usually recognise that they are qualities or properties *of sensa* ; we should not, for instance, be entitled to assert that we "select a certain part of a sense-field" in order to "perceive with it" (p. 298). For what, under these circumstances, could such an assertion imply? Hardly, I take it, that we "use" some *sensa* in order to apprehend others, since if our apprehension of *sensa* be immediate and direct, the intervention of "signs" would only be a hindrance. But I imagine I am not the only reader of Dr. Broad's works who has experienced perplexity in trying to discover how he would answer the question, *what* is it that we perceive? A perceptual situation comprises, he tells us, "(a) a sensed and selected *sensum* ; (b) certain bodily feelings connected with the adjustment and excitement of relevant sense-organs ; (c) certain bodily feelings connected with the adjustment of our muscles, etc., in order to respond to the situation ; (d) *possibly* certain images ; and (e) *certainly* vague but characteristic feelings, due to the excitement of traces." The whole of these, it is added, "are bound together into a complex of a unique kind, in consequence of which the whole situation has such and such an external reference" (p. 312). Now, of these, (b) and (c) and (e) are presumably subjective constituents of the situation, and the same apparently is true of the "external reference," which is described as a certain *conviction* we have that the "objective constituent" is part of a physical object. There remain, then, only (a) and (d) as constituents of the object. And one is left in bewilderment as to why the physical thing should be described as a perceived *object*.

5. I have urged that if *sensa* be taken to be existent entities jointly produced by external physical things and our own bodies, it is, to say the least, misleading and confusing to speak of them as "appearances of" those physical things. And one reason why

it seems to me to be so is that, in dealing with sense-apprehension, we are bound, whether we will or no, to use the phrase in another and totally different sense. What I mean will become clear from the following considerations.

Dr. Broad is severe upon a criticism of the *sensum* theory which before now I myself have ventured to press. I have argued, namely, that those who conceive a *sensum* to be an existent, distinct and separate from the physical thing to which it is said to be uniquely related, and regard it as an object upon which an act of so-called sensing is directed, are compelled to acknowledge that it may *appear* to be different from what, in fact, it is, and that, therefore, the same sort of antithesis breaks out in regard to *sensa* as, upon another theory, breaks out in regard to physical objects. Dr. Broad seeks to dispose of that objection by insisting that we ought to distinguish between failing to notice what is present in an object and noticing what is not present in an object. He contends that there is no difficulty whatever, so far as the former is concerned, that it may well be the case that certain *sensa* are, for example, much more differentiated than we take them to be, and that two *sensa* really differ in quality when we taken them to be exactly alike. I cannot admit that the objection is thereby met. You cannot usually eliminate features in an object and leave those that remain unchanged. If out of twelve characteristics of a *sensum* I discern only six, the six by themselves will in all likelihood appear different from what they would appear had they been presented along with the other six. And so, too, in reference to Stumpf's case, if we take two *sensa* to be exactly alike when, as a matter of fact there is a qualitative difference between them, it is not merely a question of the relation between them; the recognition of likeness or difference rests upon what the compared terms are apprehended as being, and if we judge them to be alike when as a matter of fact they are not, our act of so judging has come about because either one of the terms

has appeared different from what it is or both have appeared different from what they are. Or, to take another instance, Dr. Broad himself somewhere refers to the fact that ordinarily people do not take the elliptical shapes presented by a penny seen from various distances to be elliptical. The *sensa* are elliptical, but they *appear* to these people to be round, and often you cannot convince the doubters that they are elliptical. It will not do to reply that the difference is a very small one and easily overlooked. The fact remains that the *sensum* appears different from what it actually is.

It is not needful, however, to have recourse to instances of this sort. Admittedly, in every preceptual situation we do, as a matter of fact, take the "objective constituent" or *sensum* to be a part of the physical object, while according to the theory it is nothing of the kind. The *sensum*, then, habitually appears to be something quite other than it actually is. The answer will probably be made that it is one thing to judge that a *sensum* is a part of an external thing and another thing to immediately apprehend it as such. But this answer can hardly be made by Dr. Broad. For, as already mentioned, he has emphasised in more places than one that, at the purely perceptual level, people do not have the special experiences called "belief" or "judgment" and presumably he would not deny that at the purely perceptual level people do intuitively take the *sensum* to be a part of an external thing.

6. It is worth while perhaps calling attention to the different result reached by Dr. Broad, with respect to the status of the "objective constituent," in his treatment of perception and introspection respectively. He lays great stress upon the strong analogy which he considers may be drawn between the two processes. And yet, in regard to the point which one would have thought was above all fundamental, he would constitute apparently a striking contrast. Every genuinely introspective situation,

he insists, carries with it the claim that its "objective constituent" is literally a part of the empirical self, and he can find no positive reason for rejecting that claim, such as he does find in the case of the analogous claim which the perceptual situation makes for its objective constituent. It seems to me excessively difficult to suppose that there can be a vital difference of this kind between the two mental processes. The supposition would mean, if pressed, a resuscitation, in modified form no doubt, of the Cartesian standpoint, that the only certain and assured knowledge we possess is that which we have of our own mental states and processes, unless, indeed, it could be maintained that no gain, so far as knowledge is concerned, accrues from the fact that the perceptive act is in immediate relation with its object. I do not imagine that Dr. Broad would wish to defend the latter proposition. But if he does not, an awkward situation confronts him. Fenced off though we are from the external world by a substantial network of *sensa*, we have yet acquired somehow amazing insight into the nature of that world and of the physical agencies operative in it. Face to face though we are with our own mental states, we can hardly lay claim to any accurate or reliable acquaintance with them; such meagre information about them as we have acquired has been painfully and laboriously won, and exhibits no mark of immediacy.



II. *By* H. H. PRICE.

It may perhaps be assumed that the main object of our symposium is to compare the merits and defects of two well-known theories of perception: what Dr. Broad calls the Sensum Theory on the one hand, and what he calls the Multiple Relation Theory of Appearing on the other. (I shall speak of this latter as the Appearing Theory for shortness' sake.) I propose to begin by continuing, but from rather a different point of view, the criticisms brought against the Sensum Theory by Dr. Hawes Hicks. A remark which he makes on p. 4 provides me with a convenient starting-point. He says that "pre-eminently in visual perception we seem, practically at every moment of our lives, to be apprehending intuitively and directly physical things"—that is, to be apprehending not mere *sensa* which are appearances of the things, but the very things themselves. He evidently thinks, though he does not in this place say, that we really do apprehend them, and do not merely seem to do so. But he offers no proof of this proposition: he contents himself with warning us that it is very dangerous to disregard a belief which is so widespread, and that the burden of proof rests with those who hold that it is false.

Now it is worth noticing, that the Appearing Theory is not the only one which allows us to say that, in sensation, we are intuitively and directly apprehending physical things. On Mr. Russell's theory (to say nothing of the Theory of Multiple Inherence) what we intuitively apprehend in sensation is, as a matter of fact, a constituent of a physical thing: and if we intuitively apprehend a constituent of the thing, we can surely be

said, without undue stretching of language, to be intuitively apprehending the thing. What we should *not* be intuitively apprehending would be the fact that it is physical, even though it in fact is so. But then such knowledge of the fact that what I see is physical could not on any theory be held to be intuitive. Such knowledge, if we have it at all, could only be acquired by comparison of at least two "perceptual situations." And it could well be the case that although what we see is in fact always physical, yet we could never know this, but could at most believe or opine it on more or less adequate grounds; for our faculties may be such that we could never get sufficient evidence on the point.

Accordingly, the question I wish to raise is not what kind of evidence would enable me to *know* that this which I see is physical—for evidence of that kind may very well be unattainable—but what kind of evidence would justify me in *believing* that it is. Now even if there is not *sufficient* evidence of this latter sort, it is obvious that there must be *some* evidence which tends that way. It may indeed be said that that belief that this which I see before me is physical is an innate or instinctive belief, and is therefore independent of evidence. Still, even if it is, the facts must, as we say, "bear it out on the whole"—i.e., they must be more or less what they would have been if it had been true. Otherwise, the belief would not persist throughout life as it does: it would be held only by new-born infants, not by grown-up men. Nor does it persist merely because it is practically convenient: for as far as practice goes the theory of Mill or of Berkeley would do equally well, as those philosophers do not fail to point out. I wish to ask then, just what are the facts which bear out our belief (be it instinctive or not) that in sensation we are directly and intuitively apprehending a physical thing and not a mere *sensum*? And, secondly, are the facts which seem incompatible with this belief really incompatible with it?

Probably everyone will agree that such propositions as "I see something which is or looks round and red" are often true. (I say "is or looks" because I can find no higher genus of which they could be the species. Or should we say, "has got something red and round about it"?) Now the main point upon which the *Sensum* Theory departs from the *Appearing* Theory is, not that one says the something *is* red and round, while the other says it *looks* or appears so (though of course there is this difference between them). Nor does it part from common-sense at this point. Common-sense is curiously indifferent to this opposition of "is" to "looks," and uses both words quite freely in its description of what we perceive. The really vital point of difference is that, according to the *Sensum* Theory, two percipients can never literally see the same something: nor can one percipient see the same something on two different occasions: nor perceive the same something with two senses at once, or both with the mirror and the naked eye: nor, lastly, is the something which I see ever numerically identical with any something that persists, even when not perceived, and interacts with other like things and with minds. But, according to the *Appearing* Theory and according to common-sense, all those things can happen (literally and in no *Pickwickian* sense) and very often do happen. In other words, common sense and the *Appearing* Theory maintain that we immediately apprehend entities which are "public" and in many cases persistent. But the *Sensum* Theory denies that we ever do. In other words, the one view maintains that we directly apprehend a common world: the other that what we directly apprehend is always private, and that the common world is known, if at all, by inference.

Thus the really important question to which different answers are given by the two theories is not, "Do the qualities which we are made aware of in sensation really belong to something, or do they only appear to belong to something?" but rather "*To what*

do these qualities belong (if they really belong to something) or appear to belong (if they only appear to belong to something)?" The problem is not so much what relation these qualities have to their substance, but what this substance is.

Now this problem may be reduced to another. We cannot know what substance a quality ? belongs to unless we know what other qualities ? is united with. On the view which holds a substance to be nothing else than a set of qualities united with one another, these two questions, of course, mean exactly the same. But even if we hold that there is something else over and above the united qualities to which they all "belong," we cannot *know* that they all belong to it unless we first know that they are united with one another.

We can now restate more clearly the essential difference between the two types of theory. According to the Appearing Theory, it is very often true that (1) the qualities which I am sensibly aware of, and (2) the qualities which some other percipient is sensibly aware of, and (3) the qualities which I have been sensibly aware of on other occasions, and further (4) certain physical qualities such as the having a certain mass, size, shape and position- that all those qualities belong to the same substance. And common-sense agrees.

According to what we may call the ordinary form of the *Sensum* Theory, if a quality falling under any one of these four heads belongs to a substance, no other quality falling under any of the other three heads can belong to that substance.

According to Dr. Broad's peculiar form of the *Sensum* Theory, qualities falling under (1) not only often but always belong to the same substance as those falling under (3) (this substance he calls a *sense-history*). But (2) and (4) never belong to the same substance: and neither of them ever belongs to the same substance as (1) and (2) belong to.

What evidence is there for or against those three views? In order to answer this question we must raise still another: what do we look for in other cases, when we wish to discover whether c and c^1 are characteristics of the same thing—*e.g.*, whether two actions, say a murder and the taking of a railway ticket, were done by the same man? This is one of the most difficult questions which can be asked; but it is essential to attempt some answer to it. We may perhaps enumerate certain criteria which would generally be applied:—1. Variations in the one characteristic must be to some extent correlated with variations in the other, if the two exist simultaneously; if successively, either there must be some sort of qualitative continuity between them, or at any rate c^1 must have this kind of continuity with some other characteristic d simultaneous with c , and varying with c in the way just mentioned. 2. Both c and c^1 , if simultaneous, must be related in the same kind of way to the same region of space, if successive to the same region or continuous series of regions, (we cannot say must be *in* the same region, for this would not apply to mental characteristics). 3. We think that if c and c^1 are characteristics of the same thing, it ought to be possible to exhibit both their changes and their coming into being as “cases” of a common law or principle, which we call the nature of the thing, or, in the case of a man, his character or disposition. Some philosophers would perhaps wish us to add a fourth criterion, similarity. Indeed, they would put this first. To them we would answer: If you mean *sensible* similarity, this is often absent—*e.g.*, the same coloured patch is both round and red, but redness is not in the least like roundness. But if you mean some more recondite sort of similarity, as when we say “it was just *like* So-and-so to do that,” this is already provided for under our three heads.

When confronted by a pair or set of characteristics which satisfy two of these criteria only common-sense is puzzled, and

does not know whether to attribute them to the same substance or not. It says, for instance, "I saw the Derby on the film," and "I saw a picture of the Derby on the film"; or again, "I see my face in the looking-glass," and "I see a reflection of my face in the looking-glass." We need not refer to Sir J. Cutler's stockings or to Hume's parish church. In view of such cases, it seems possible that we should allow not, indeed, degrees of thinghood or one-thingness, but different degrees of unification, of which the unity of a thing as commonly conceived would be the limiting case.*

We may now apply these considerations to the *Sensum Theory*. We may distinguish two forms of this theory—which we may call the *Discrete Theory* and the *Theory of a Sensory Continuum*. The second is held by Dr. Broad, the first (apparently) by other advocates of the *Sensum Theory*.

On any form of *Sensum Theory*, *sensa* are a peculiar kind of existents, neither mental nor physical. They come into being when a physical object acts upon an organism possessing a mind, and not otherwise, so far as we know. But once in being, they are, so to speak, just as good substances as minds or bodies. They have the peculiar property of being "appearances of" or "manifestations of" substances other than themselves. And they are private to the mind that senses them.

Let us take first the *Discrete Theory*. Here the appearances of a thing to sight and to touch, to you and to me, by mirror and by normal vision, though they are all "of" the same thing, are in themselves numerically different substances. Consider, for instance, a case where a number of observers are looking, as we say, at the top of the same table. Here, according to the theory, we have a set of numerically different *sensa*, each of which is a separate substance: that is, the qualities sensed by A do

* Or would the unity of a certain kind of things—viz., minds—be the limiting case?

not belong to the same substance as the qualities sensed by B belong to, and if A shifts his position or puts on a pair of spectacles the qualities which he then senses will belong to a new substance, different from the one he was sensing a moment before. But, if we now make, as it were, a pool of all the qualities sensed by all these observers, is it not obvious that by our three criteria they all belong to a single substance? And if we add to the pool what we commonly regard as the physical qualities of the table-top, must not they, too, be attributed to that same single substance? The variations of the qualities are correlated and concomitant. They are all related to the same region of space: each is, indeed, "in a place from a place," but the "places in which" all fall within a certain small region, and the "places from which" within a sphere surrounding the "place in which." Lastly, these variations in respect of shape and position may all be brought under the law or principle that they are all either portions of or perspectival distortions of a single solid shape.

These are the facts which lead common-sense to say that all the observers are seeing the same single thing, and that that thing is a physical object. But all these facts are ignored by the Discrete Sensum Theory. It does not even use them in defining its relation of "being an appearance of the same thing as": on the contrary, it either says explicitly that this relation is indefinable, or ignores the question altogether. But the Discrete Theory sins by commission as well as omission. Its *sensa* are substances, but their nature is so very peculiar—quite unlike the nature of ordinary substances. In the first place, as Dr. Broad himself points out, they are created *ex nihilo*, and (it seems) vanish again *in nihilum*. And this is a kind of causation to which there is no parallel.* Again, it is very doubtful whether

* It may be said that any substance having emergent qualities is in some sense created *ex nihilo*. As Aristotle says, "It is and again is not without process of growth and decay." But the truth is that, though

a sensum can be said to persist or even to change: must they not be created anew at every instant? It is, at any rate, fairly clear that, if the cerebral processes which created a given sensum are stopped, the sensum at once is not, but "goes out bang," like the things in the Red King's dream. And does not this imply that a new sensum is created at every instant? A kettle is made by human hands, but once made it has a history of its own and as it were, goes its own way. It does not need the continuous intervention of its maker. A genuine substance has a certain inertia, or power of self-conservation, however fragile and destructible it may be ("in esse suo perseverat"). But this a sensum wholly lacks. Again, a sensum can neither cause changes, nor suffer them: this follows at once if the previous point about continuous re-creation be granted. But, even if it is not granted, what evidence is there, we may ask, that a sensum ever affects anything else or is affected by it? It cannot even affect the mind that senses it, for it is not the sensum, but the sensing of it, which terrifies me or reminds me of So-and-so. Still another suspicious point about *sensa* is that we cannot draw with regard to them the distinction between intrinsic and extrinsic characteristics, a distinction which we seem to find in all ordinary substances. A table, for instance, is still the same thing if it is taken from this room to that, or painted another colour; though it is not the same thing any more if broken up for firewood. Again, the same man can be now in London, now in Thibet, without prejudice to his sameness. A sensum has, so to speak, no private nature of its very own, but is entirely dependent on the bounty of other things. We cannot say at all, what it would be if its

such a substance is something other than the sum of its parts, yet it does have parts and is in some sense "made out of them." In any case, such a contention would not help the Sensum Theory, which holds that *sensa* are *simple*. It would only help a theory of "compound things" such as that put forward by Professor Alexander in S.T.D., vol. 2, p. 191.

present relationships were altered, or what it would have been if they had been different. For *all* its characteristics, without exception, are dependent on processes in physical objects, organisms and minds—this is, indeed, what we mean by saying that it is “created” by them. *All* that it has comes to it from without: how, then, can we say that there is any “it” to come to?

These difficulties, I suppose, are very similar to those raised in the Cartesian philosophy by the doctrine of Divine conservation. The world of *sensa*, as portrayed by the Discrete *Sensum* Theory, is very like the Cartesian universe with the brain (and mind?), of the percipient playing the part of the Cartesian Deity. Here, as there, we can find room for occasionalism (for one *sensum* cannot or does not act on another, as we have seen); and the relation between (say) normal *sensa* and mirror-images is one of pre-established harmony. Here, as there, we find a very singular, if not unintelligible kind of causation, and a kind of substances which do not seem to be substances at all.

For these reasons, we should surely be very suspicious of the Discrete *Sensum* Theory: we should only accept it if there is absolutely no other alternative.

Some of the omissions and commissions that we have mentioned are avoided by the other form of the *Sensum* Theory, viz., the theory of a Sensory Continuum put forward by Dr. Broad, but I think not all of them. In the first place, all the sense-qualities ever sensed by me belong, upon this view, to a single substance, called by Dr. Broad my “sense history.” Now the Discrete Theory gave us too little unity; but does not this theory give us too much—more than the facts will warrant? Some pairs of sense-qualities sensed by me certainly seem to satisfy our three criteria, and therefore belong to the same substance; but not *all* pairs. For instance, the sound of St. Mary’s bell, the smell of this piece of clover, and the yellow something which I see when I look at the moon in the sky, seem

to have nothing in common at all, except the fact that I sense them*: and if *that* is the criterion, will not everything that I ever know form one substance, or, at any rate, all that I know immediately? And so Dr. Broad will fall into the arms of Spinoza, or Mr. Bradley, or, possibly, M. Bergson.

But if the theory gives us too much unity at one point, it gives us too little at another. Like the Discrete Theory, it seems to ignore the intimate relations which often subsist between qualities sensed by me and qualities sensed by other people, and between sensed qualities and physical qualities; or, if it does not ignore them, it ignores their intimacy—i.e. the fact that they are just the relations which we expect to subsist between qualities of the same thing.

And on the other side, the continuous sensory substance, if not quite so peculiar as the separate *sensa* of the Discrete Theory, is certainly odd enough. It, too, can neither affect other substances nor be affected by them: all it can do is to grow. And even this is not growth in the ordinary sense: it is simply a growing longer in the Time-dimension. Like the discrete *sensa* of the other theory, it seems to have no intrinsic characteristics of its own. It has to be "conserved" by perpetual re-creation at every instant. So far as I can see, it is broken by any interval of unconsciousness. When we wake up again we start upon a new sense-history, numerically different from the old. And, lastly, the privacy of sense-histories and their curious spatial and temporal characteristics are bound to make us a little suspicious.

In view of these serious difficulties, which beset both forms of the *Sensum* Theory, could we not hold instead that the

* Even if we had confined ourselves to *sensa* of one sense simultaneously given, the result would have been the same. What is there in common between the visual appearance of the moon and the visual appearance of St. Mary's spire, except the fact that they are both sensed by me at a certain moment?

sense-qualities revealed to several different observers on several different occasions, may in some cases, belong to the same substance, and that this substance also has physical qualities? Unfortunately, the facts of illusion prevent us from going quite so far as this. The best we can do is to say that it is the same substance which *has* the physical qualities, and *looks* or *appears* to have the sense-qualities.* "Looking" or "Appearing" will have to be a many-term relation, as Dr. Broad points out. The proposition "A appears to have the quality *q*" means nothing as it stands. A can only appear *q* to someone from somewhere.

This view is exposed to several well-known objections:—1. First, how can a thing look what it is not? Or (from the other side) if we see a thing, must we not see it as it really is? 2. Even if this is possible, what is to be done about double vision? Even if "A looks red" means something, surely (it is urged) "A looks double" can mean nothing. For doubleness is not a quality, like redness and roundness. Redness and roundness, even if they do not really belong to this thing before me, but only appear to do so, are at least the sort of qualities that *might* really belong to a substance. But to say that a substance even might be double is a contradiction in terms, for it means that *one* substance might be *two* substances. 3. What is to be done about hallucinations? When a man sees a ghost, are we to say that his brain or mind look ghostly? Is it the drunkard's brain that looks pink and rat-like when he sees the notorious pink rats? 4. Even mirror-images cause difficulty. When I look at my

* I have not discussed the Theory of Multiple Inherence, which is the other alternative examined by Dr. Broad, because I cannot help thinking that it reduces to the Appearing Theory. It is very hard to believe that A can have the quality *q* from a place *p*, and the quality *q'* from a place *p'*, unless *p* and *p'* contain not merely organisms but organisms with sentient minds. And, further, one cannot help thinking that these minds must be sensing A. The mere fact that they are sentient does not seem enough.

finger in a mirror (to borrow an example of Dr. Broad's), are we to say that a piece of glass or, still worse, some bricks and mortar behind it, looks pink and oblong? Or are we to say that my finger appears to be in a place where it is not, and to be reversed as to right and left? But in that case we are faced by objection No 2. 5. The theory, as ordinarily stated, is not agnostic enough. The usual statement is, "This penny looks elliptical to me from here, and is really round." But how do we know that it *is* a penny and is really round?

We have stated the objections in order of difficulty. Let us deal with them in the reverse order. To meet the last, it is only necessary to distinguish very sharply between what is revealed in *one* "perceptual situation," and what is revealed *several*. A single perceptual situation can only reveal that (for instance) here is *something* which looks round and red to me from this position. *What* the something in question is, how long it persists, what other qualities it looks to have from other positions and to other people, and what physical qualities it has, can only be revealed (if at all) by comparison of many perceptual situations. Until I have been in those perceptual situations, and heard reports from other percipients, I have no right whatever to call the something by such names as "penny" or "table." I can only call it "something or other." (I can, of course, *believe* or *opine* that it is a penny or a table, and call it so on the strength of my belief or opinion. But I cannot *know* that it is one. Indeed, perhaps I can never be absolutely *certain* that it is one. For it may be that, in order to do so, I should have to examine and compare an infinite number of perceptual situations).

The second and fourth objections may be taken together. Certainly they are much harder to meet. Nor can I think that Dr. Hicks' suggestion is satisfactory. He remarks, on p. 7, that the space in which the mirror-image's qualities appears to inhere (and, we might add, the qualities of the second image in double

vision) is physically filled by particles of air and other things ; and these, he says, " would provide substance enough for sensible qualities to inhere in or appear to inhere in." No doubt this does meet the objection brought forward by Dr. Broad, and saves us from making regions of space into a kind of substances. It will not, however, solve the difficulty which we are discussing here, but will only, at most, explain it away. For the difficulty is, that according to our three criteria, the two sets of qualities which are revealed in double vision *ought* to belong to the same thing : and then we shall have to say that the thing looks double, which seems absurd. If, on the other hand, we give up our three criteria, we have no ground for holding the Appearing Theory at all.

There is, however, another suggestion which we often hear made. It is often said " There is no real difficulty about double vision : the reason why you see double is simply that you have two eyes." This, as it stands, sounds singularly irrelevant. The number of eyes we have seems no more to the purpose than the number of fibres in our optic nerve, or of cells in our cerebral cortex. But perhaps the statement means more than it says. Perhaps it means that, in so-called double vision, what happens is not that the thing we see looks double, but that we see it twice over from two places at once. The doubleness would be in our acts of seeing, and in the places from which we see, not in the thing seen. Thus, just as we raise no difficulty over the fact that the same thing can be seen by two people at once, and do not call this a doubleness in the object—not even an apparent doubleness—so, it may be said, we should raise no difficulty if the same person sees a thing twice over at the same time. Of course, if this is right, even in " normal " binocular vision we shall be seeing things twice over and from two places at once, but the object appears from the one place to be in a certain place, and from the other place it appears to be in that same place ; and so no

difficulty is raised. Mirror vision could be dealt with in a similar way. A mirror, we should say, is a device which enables us to see the same object from two points of view at once. It is true that the object when seen by the help of the mirror appears to be reversed as to right and left. But that is a kind of appearing which raises no difficulty of principle. If a round thing can look elliptical, a right-hand glove can look left-handed.

But it may be said, "it does *look as if* we saw two things : what we see does *look like* two pencils, though in fact there is only one pencil there." This is perfectly true. But we must distinguish very sharply between what a thing *looks* and what it *looks like*. Examples will show what the difference is. We say "That looks like a man, or like Jones"; we do not say "That looks a man, or looks Jones." Nor do we even say "That looks a table." When we use the simple verb, the predicate is always the name of some *sensible* characteristic like "round" or "square," or "bigger than this" or "farther away than that." But obviously a thing may look *as if* it had *any* sort of characteristic, sensible or not sensible—*i.e.*, it may look to have the sensible characteristic *c*, which it would have if it also had some other characteristic *c*¹, sensible or not sensible. That is, if it had *c*¹, it would look *c*. But we cannot conclude from this that because it looks *c*, it must have *c*¹. Now in so-called double vision, what we see does look *as if* it consisted of two things—it does look just what it would look, if it in fact consisted of two things. But it does not look to consist of two things: for "consisting of two things" is not a sensible characteristic, and therefore nothing can look it. And what we see does not *only* look as if it consisted of two things: it also looks as it would look if we were seeing the same thing twice over from two points of view. The question concerns not what is sensibly given, but what we are to *believe about* the given. And if we take one perceptual situation by itself, the one belief is just as probable as the other. Whether

there are really two things there, or only one thing seen twice over, cannot possibly be decided by inspection of one perceptual situation, but only by comparison of several.

We may now go on to the second objection, about hallucinations. It certainly seems absurd to say that it is our brain that looks ghostly when we see a ghost. No doubt, in many hallucinations there is an external "cue"—as, for instance, when we misread printed words or the number of a 'bus or miss-see a tree-stump as an owl. When, for instance, we mis-read the number of a 'bus—taking No. 3 for No. 8—it is the black marks on the number-plate which appear to form a closed figure when they really form an open one. Only it is our mental attitude of expectation— and not, as usual, our physical position—which determines it to appear so. But in full-blown hallucination there is either no external cue at all or, if there is, it is so insignificant that it acts simply as a stimulus: it is not itself the thing that appears so-and-so*—it makes something else appear so-and-so, just as spectacles do. And this, of course, is the case that causes difficulty.

But why, after all, should we not say that when we see a ghost it is our own brain which appears ghostly, and appears to be in a place where it is not? We answer: So far as we know, there is not that *detailed* and specific correlation between the sensible characteristics of the ghost and the physical characteristics of our brain which would be required if these two sets of characteristics are to belong to the same thing. So far as we know, there is only a *general* correlation; and, conceivably, it may only be the fact that *we see* the ghost, which has its specific correlate in the brain. But probably there is a specific corre-

* How do we know this? Because its qualities are not correlated in detail with those that the perceived something appears to have; whereas in the case of the misread number there is some correlation in detail, and in the case of the stump which looks like an owl there is a great deal.

ation between the characteristics of what we see and the characteristics of something we have seen in the past. And this suggests that what we see is a past object appearing to be present. If objects can appear to be displaced in space (as they certainly can), why should they not appear to be, as it were, displaced in time? "Presentness" or "nowness" is as much a sensible characteristic as hereness or thereeness. If we believe that there can be "veridical" telepathic hallucinations, these can be more easily dealt with. We should only have to say that what is in fact happening at a distance appears to be happening in this room.

We come last to our first and most formidable difficulty, How can a thing look what it is not? The simplest answer is, Why shouldn't it? And perhaps that is the sufficient one. And we may point to certain confusions which prevent people from accepting it. "A looks B" does not mean the same as "A is believed to be B"; still less does it mean "A is falsely believed to be B." (The proper word for this is surely "seems," or if A is sensible "looks like," as we have said.) "Looking" has nothing to do with belief, true or false. The statement "Something looks so-and-so to me from here" describes a relation between a thing and a sensing mind: the mind may also be believing or judging, but that is irrelevant. No doubt, we cannot describe or analyse a perceptual situation* without judging; but we can be in it without judging,—or, if we do, as a matter of fact, always judge about the situation, still we must first *be* in it in order to judge about it.

The other confusion which we must advert to is between *sensing* and *knowing*. If being sensed meant the same as being intuitively known, then of course a thing could not sensibly appear to be what it is not: for nothing can be known to be

* "Sensual situation" would surely be a better name.

what it is not. But why should sensing be a form of knowing? Because it is or includes a direct relation between a mind and a real object? This is not a sufficient reason. There are many mental attitudes besides knowing which include, as part of their being, a direct relation between a mind and an object: for instance, fearing, being pleased at. In æsthetic and mystical experiences, again, there seems to be a direct relation between mind and object, but it is not one of knowing. It may be said, These relations *are* not the relation of knowing, but they only occur when the relation of knowing is present. Let this be granted, though it is by no means certain. (Is it true of mystical experiences, for instance?). We can still maintain that sensing is other than immediate knowing, but that it is always accompanied by such knowledge—viz., the knowledge that some real thing or other is presenting itself to me. Or again we may hold that sensing is a complex process (or attitude) which consists of immediate knowing and of something else. Is not this exactly what we should expect? Nature is no prodigal; she is not likely to have allowed us any more immediate knowledge than is absolutely necessary for purposes of life. And by comparison of several perceptual situations, we can arrive at highly probable opinions about the detailed structure of objects, even though it is not immediately known to us. Can we expect more than this?



III. *By G. E. MOORE.*

I WANT to confine my share in this discussion to one particular issue, as to which I think I agree with Dr. Broad and differ both from Prof. Dawes Hicks and Mr. Price. This issue concerns a theory which I take to be a part, though only a part, of the theory which, in "The Mind and its Place in Nature," Dr. Broad calls "The Sensum Theory," and which he has tried to formulate both on pp. 181-2 and also more briefly in an earlier passage, p. 161. It must be remembered that Dr. Broad does not profess to consider this "Sensum Theory" anywhere near certain. On the contrary he only makes for it, as Prof. Dawes Hicks has pointed out, the extremely modest claim that, as against the two other theories with which he compares it, "the balance of advantage seems to be *slightly*" on its side (p. 195; my italics). I think he would probably say as much as this (he could not consistently say more) if, instead of comparing the Sensum Theory with those other two, he were to compare the hypothesis that the Sensum Theory is true with the bare hypothesis that it is false, I think he would say that the chances that it is true seem to him slightly greater than the chances that it is false. But whether he would do this or not, I certainly get the impression that he is against the view that the arguments for its falsehood are at all considerably stronger than those in favour of its truth. Both Prof. Dawes Hicks and Mr. Price, on the other hand, though they do not expressly say so, give me the impression that they hold this very view. While not contending that it is anywhere near certain that the Sensum Theory is false, they do, I gather, hold that it is *considerably* more likely that it is false than that it is true.

Now I imagine that the respective attitudes of these three philosophers would be the same if what they were considering were, not the Sensum Theory as a whole, but the particular part of it which I wish to discuss. I imagine that Dr. Broad would still say that the arguments for the falsehood of this part seem to him, if not positively weaker, at all events *not* greatly stronger than those in favour of its truth; and that the other two would still say that the arguments for its falsehood seem to them considerably stronger. Upon this precise issue, if I am right in my view as to their attitudes, I agree with Dr. Broad and therefore differ from Prof. Dawes Hicks and Mr. Price.

The particular part of the Sensum Theory which I wish to discuss may be stated as follows:—

It is concerned only with visual perception; and, not even with nearly *all* cases of visual perception, but only with one special class of cases. The cases in question are those in which all four of the following conditions are realised. (1) We are seeing a physical object single, not double; that is to say, have *not* got what is called “a double image” of it. (2) The object in question is opaque; we can not see through it, but can only see certain parts of its surface, not its inside, nor those parts of its surface which are turned away from us. (3) We are able to pick it out or discriminate it from other physical objects which we are seeing at the same time, sufficiently clearly to make judgments (true or false) with regard to it, such as we should express to ourselves by saying “*That* is hard,” “*That* is soft,” “*That* is red,” “*That* is a chair,” etc., etc.; which is a sign that there is no appreciable degree of indefiniteness in our own minds, as to *which* among the physical objects which we are seeing at the time is the one our judgment refers to. (4) Any two of its parts which we are seeing are continuously joined to one another by another part which we are also seeing: that is to say, we are *not* seeing it only in the way in which I should be seeing my thumb, if a piece of string were

lying across the middle of it, so that I saw its upper and its lower half, but did *not* see the thin strip joining the two which was covered by the string.

Suppose A is a physical object which we are seeing in this way. It seems to me that there will always be, in such a case, a part of A's surface of which we can properly speak as *the* part of A's surface which we are at the moment seeing: not that this part will strictly be the *only* part of A's surface which we are seeing, for we shall in general be seeing also an immense number of other parts which are parts of this part, though we shall not be able to discriminate nearly all of them; but it seems to me that it is in fact good English to use the phrase "*the* part of A's surface which I am seeing" to mean "*the* part of A's surface, of which all the *other* parts which I am seeing are parts." If, on the other hand, condition (4) were not realised, there would be no part of A's surface of which we could properly speak as *the* part of its surface which we are seeing at the moment.

In all such cases, then, the following two things are always true. (1) We are, *ex hypothesi*, seeing A itself. (2) There is also a part (not the whole) of A's surface, which is *the* part of A's surface which we are seeing. But it seems to me that there is a third thing which is also, in all such cases, always true: viz. (3) we are directly aware of, and can easily pick out or discriminate with no appreciable degree of indefiniteness, one object and one only of which the following five propositions are all true, viz., (a) that, if we raise the question, we are tempted to suppose it to be identical with *the* part of A's surface which we are seeing, (b) that we do not, nevertheless, know for certain that it is a part of A's surface at all, (c) that it certainly does, in a sense, sensibly appear to us to have certain sensible qualities, though, unless it is identical with the part of A's surface which we are seeing, the sense in which it "sensibly appears" to have them is a different (and more fundamental) one than that in which this part of

A's surface sensibly appears to have certain sensible qualities, (d) that, among all the objects which are at the moment in the same sense sensibly appearing to us to have sensible qualities, it is the only one which we have the slightest temptation to identify with the part of A's surface which we are seeing, (e) that, if we were at the time to make any judgment about A of the kind which we should express to ourselves by "*That is hard,*" "*That is red,*" "*That is a chair,*" etc., etc., every such judgment would undoubtedly be a judgment about it—that is to say, every such judgment would consist in asserting *something or other* about it, though, of course, *what* it asserted about it would not necessarily be that *it* was red, or hard, or a chair, etc., nor even that it was part of the surface of a thing which possessed those predicates. It seems to me quite plain, that, whenever I am seeing a physical object *under the stated conditions*, I am directly aware of one object, and one only, which satisfies these five conditions. I am, for instance, at the present moment seeing my own right thumb in the way required, and I can, without the slightest difficulty pick out an object, and one only, which seems to me quite obviously to satisfy them all. And any one of you, by merely looking at your thumbs, can satisfy yourselves that the same is true of you. There is no doubt whatever about the existence of this object, whose relations to me and to my thumb I have tried to describe, even if my description of these relations is not in all respects perfectly satisfactory.

Now let us substitute for the whole long statement consisting in the assertion that whenever we see a physical object A under the stated conditions, then the whole of (3) is true, the following short one, namely: whenever we see any physical object, A, under the stated conditions, we are directly aware of one sense-datum, and one only, which corresponds to A. (It must be noted that I am proposing to use this short expression to mean *exactly the same* as, neither more nor less than, the very long one

just given). We can then state the particular part of the *Sensum* Theory which I wish to discuss, as follows :—

Whenever we see a physical object, A, under the stated conditions, then the sense-datum corresponding to A, of which we are directly aware, is never identical either with A itself, or with the part of A's surface which we are seeing, or with anything else which is a part of A in the plain sense in which my thumb is a part of my hand.

My reasons for thinking that this is a part of what Dr. Broad calls the *Sensum* Theory should be given shortly. If you compare his statements, on p. 161 and pp. 181–2, of what the *Sensum* Theory asserts, you will find, I think, that *part* of what it asserts is the following proposition :—

“The objective constituents of perceptual situations are never literally spatio-temporal parts of any physical object which we are said to be ‘perceiving.’”

And my reasons for thinking that what I have stated is a part of this part are (1) that it seems to me quite plain that the kind of objects, which I tried to describe under (3), and which I am calling “sense-data of which we are directly aware and which correspond to some physical object which we are seeing,” are *included* in the class of objects which Dr. Broad calls “objective constituents of perceptual situations,” so that whatever is asserted of the latter is asserted of them, and (2) that when he says objective constituents are never “literally spatio-temporal parts” of any physical object which we are said to be perceiving, he means at least to include the assertion that they are not identical either with the whole of any such object, or with any part of its surface, or with any other part in the sense I have pointed out.

It should be noted that the sense in which I am using the term “sense-datum” is fundamentally different from that in which Dr. Broad deliberately intends to use the similar term “*sensum*.” It follows from my definition that in cases of visual perception

of the kind to which I am confining myself, (1) it is quite certain that we are always directly aware of a sense-datum and (2) it is quite possible that the sense-datum in question may be a part of the surface of the physical object we are seeing; whereas with Dr. Broad's use of "sensum," in the same cases (1) it is only, at most, slightly more probable than not that we are directly aware of a "sensum" and (2) *if* we are, then the sensum in question is quite certainly *not* a part of the surface of the physical object we are seeing. The point may be put roughly by saying that what I call "sense-data" are "sensa" in Dr. Broad's sense only if the Sensum Theory be true. I am sorry to be using so similar a term in a sense so different from that in which he has chosen to use "sensum," as it may lead to confusion; but I have been unable to think of any other term that would serve my purpose nearly as well.

And it is important also to point out one consequence of that part of the Sensum Theory with which I am concerned. It follows, namely, that if that theory is true, then, in the cases of visual perception in question, we are never *directly* aware either of the physical object which we are seeing *or* of any part of it or any part of its surface. This is not a *logical* consequence of the theory: it would be *logically* possible to hold, and I am not sure some philosophers have not held, that though the corresponding sense-datum is not identical with the physical object or any part of it, yet we are *also* directly aware of the physical object or some part of it. It seems to me, however, that it is practically certain that this is false. If the corresponding sense-datum is *not* identical with the part of the surface of the physical object which we are seeing, then we are certainly not directly aware either of that object or of any part of it. And a further much wider consequence seems to me also to follow (though, of course, not logically) namely, if in these cases of visual perception we are never directly aware of any physical object or any part of one,

then we are never in any case of perception whatever directly aware of any physical object at all or any part of one. Of course, it does not follow from this that we never *perceive* physical objects: *ex hypothesi*, we do. It only follows that "perception," in both of the two senses in which we most commonly use it of physical objects, namely, (1) that in which I am now "perceiving" my thumb, (2) that in which I am *only* "perceiving" a certain part of its surface, is a name, not, as is often assumed, for a *direct* cognitive relation, but only for an indirect one.

I maintain, then, that the arguments against that part of the Sensum Theory which I have stated are, if stronger at all, at most only slightly stronger than the arguments in its favour, whereas I understand Prof. Dawes Hicks and Mr. Price to think they are *considerably* stronger.

What arguments do they bring against this theory?

It seems to me that in section 1 of his paper, Prof. Dawes Hicks does adduce one powerful argument against it—an argument much more powerful than is anywhere else adduced either by himself or Mr. Price; but it seems to me that he has mis-stated this argument in a most fundamental and important respect. He says that "in visual perception we seem" constantly "to be apprehending . . . *directly* physical things." And I agree with him that I do now *seem* to be apprehending directly a part of the surface of my thumb; that I constantly *seem* to be apprehending directly parts of the surfaces of other physical things; and that the first of these two facts is, by itself, an extremely powerful argument in favour of the view that I *am* apprehending directly a part of the surface of my thumb: from which, as I have said, it would seem to me to follow with practical certainty that the corresponding sense-datum is a part of the surface of my thumb (since, *unless* it is, I think it is practically certain that I am *not* directly apprehending any part of my

thumb), and that therefore the Sensum Theory is false. But, then, Prof. Hicks goes on to add that "beliefs" like this, that this sense-datum is a part of the surface of my thumb "absolutely dominate our ordinary thought and conduct," are "overwhelming assurances of ordinary experience," and that "plain men and philosophers in ordinary life invariably think and act on the basis of" such "beliefs." And as to all this I am extremely doubtful. It seems to me that the sort of "beliefs" about which this language can be used are "beliefs" of a totally different kind—such so-called "beliefs" as that which I now express by saying "*This is a thumb*," so-called "beliefs" which seem to me to be not "beliefs" at all, but cases of knowledge: I actually know that this is a thumb, and if the proposition that "*This is a thumb*" could be shown to be inconsistent with the Sensum Theory, I should say the Sensum Theory was *certainly* false. The reason why Prof. Hicks thinks that such "beliefs" as that this sense-datum is a part of the surface of my thumb "dominate our conduct," is, I think, obviously that he accepts the view of Dr. Broad, which he quotes, about the claims which "perceptual situations" make about their "objective constituents"—that is to say, the view that part of what I know (or "believe") when I know "*This is a thumb*" is that the corresponding sense-datum is a spatio-temporal part of a physical object. But this view of Dr. Broad's seems to me at least as doubtful as the view that the Sensum Theory is false. For if it were certain that the proposition "*This is a thumb*" entailed the proposition "*This sense-datum is a spatio-temporal part of a physical object*," then I should say it was *certain* that the Sensum Theory was false: since my view is that I *know* the proposition "*This is a thumb*" to be true. But the "belief" that this sense-datum is a part of the surface of my thumb, seems to me to be of an entirely different order: so far from "absolutely

dominating our thought and conduct," I think that probably most plain men never entertain "beliefs" of this kind at all. What I think is that, *on philosophic inspection*, it does *seem* to be true that this sense-datum is a part of the surface of my thumb, and that, *therefore*, I am directly apprehending a part of this surface. And this does seem to me to be a very powerful, but by no means conclusive, argument in favour of the view that this sense-datum is a part of the surface of my thumb; from which it would follow directly that the Sensum Theory is false.

In section 3 Prof. Hicks discusses Dr. Broad's view that, when we sense a number of different *sensa* at the same time, we do not have as many different *acts* of sensing as there are different *sensa* sensed, nor even as many as there are different sense-fields to which they belong, but only one act of sensing which senses them all. And he suggests that he thinks certain objections, which he urges against this view, constitute so many objections to the Sensum Theory itself. He suggests this by saying that "In working out the sensum theory, Dr. Broad *finds himself constrained*" to adopt this innovation: that is, he suggests that Dr. Broad saw that the Sensum Theory would not be tenable at all, or at least would not be so likely to be true, unless there were such "general acts of sensing," and *therefore*, or partly *therefore*, adopted the view that there were such acts. And he suggests this again, by saying later: "I am inclined to agree with Dr. Broad that the sensum theory, when fully worked out, *must* take some such form" (my italics).

Now, as to this, all I have to say is that I entirely fail to see any logical connection whatever between the Sensum Theory and this hypothesis of "general acts of sensing"; nor can I see that Dr. Broad suggests that in his opinion there is any. He seems to me to put it forward purely on its own merits; and, so far as I can see, there are precisely as good reasons for holding that there is only one act of sensing for all simultaneous sense-data, on the

hypothesis that sense-data are *not* *sensa*, as on the hypothesis that they are. I think, therefore, that Prof. Hicks' objections to "general acts of sensing" would, even if sound, not constitute the slightest argument against the Sensum Theory; and I must therefore pass them by, though, I think, if there were time, that there are plenty of objections to be urged against his objections.

It seems to me, similarly, that a good deal of what he says in section 4 is quite irrelevant to the merits or defects of the Sensum Theory. It is no part of the Sensum Theory to assert that corresponding sense-data, *if* they are *sensa*, can be properly called "appearances" of the physical object to which they correspond, and therefore it can be no objection to that Theory to urge that they cannot. Part of what Prof Hicks here says is, however, of course relevant. It certainly is the case that at least a great part of our knowledge about physical objects is somehow or other derived from the fact that the sense-data which correspond to them are perceived by us to have, or sensibly appear to us to have, certain qualities and relations to other sense-data; and part of Prof. Hicks point is, I gather, to urge that on the hypothesis that sense-data are *sensa*, it is very difficult to see how any of this knowledge could have been thus derived. This is admittedly an objection to the Sensum Theory; Dr. Broad has discussed it at great length, and has done his best to show how he thinks such knowledge could be derived. But the important point, in view of our present discussion, is the question whether it is *less* difficult to see how our knowledge about physical objects could have been derived on the theory that sense-data are *not* *sensa*. Dr. Broad has argued (pp. 189-192) that it is *not* less difficult. I agree with him and I cannot see that Prof. Hicks has adduced anything new in favour of the opposite view.

On the whole, I cannot see that he has given any arguments having a tendency to show that corresponding sense-data are appreciably more likely to be identical with the physical objects

or parts of the physical objects to which they correspond, than never to be so.

I greatly regret that, owing to the lateness of the date at which I received the two preceding papers, I have no time left to discuss Mr. Price's.

IV. *By* L. SUSAN STEBBING.

I UNDERSTAND that in this symposium we are to discuss the theory of Sensible Appearances worked out by Dr. Broad under the name of the "Sensum Theory." As I have seen only the first two papers, and as I have very little time in which to say anything, I propose first to state briefly what seems to me the main difficulty in Dr. Broad's theory as put forward in his later book, *The Mind and its place in Nature*; secondly to discuss with equal brevity one of the main reasons he gives for rejecting that theory of Sensible Appearance to which he gives the name "Multiple Inherence," and which he associates with the work of Professor Whitehead. The objection is that the theory requires the assumption of Absolute Space-Time, whereas Dr. Broad considers that it is the peculiar merit of his own theory that it does not require such an assumption, and for this reason, he thinks, the balance inclines in favour of the greater plausibility of his own view. Dr. Broad is, in my opinion, mistaken in supposing that the theory of Multiple Inherence must assume Absolute Space-Time, and as his reasons for this supposition seem to me intimately bound up with the main defect of his own theory perhaps the best way of meeting the objection is to begin with a criticism of the Sensum Theory itself.

There are important differences between Dr. Broad's two expositions of his theory, and in the second the difficulties in the way of its acceptance have become clearer. The most striking novelty is to be found in the introduction of the notion of the epistemological object. It is extremely difficult to ascertain what kind of an object this can be. So far as I can see there

are four different kinds of entities—all of which are called “objects”—which will have to be taken into account; *sensa*; physical objects; epistemological objects; ontological objects. When we are said to “perceive a physical object” we do not, according to Dr. Broad, *see* the physical object; we *see* the *sensum* and *judge* that the *sensum* is in a certain relation *R* to the physical object. It is clear, as Professor Hicks has pointed out, that on Dr. Broad’s theory we can never be said to *perceive* the physical object at all. It is this fact—that we do not perceive the physical object—that makes it so difficult to know what the epistemological object is; how it is related to the ontological object; and finally, what is the relation of both of these to the physical object with which in perceptual situations they clearly have an essential relation.

What, then, is the “epistemological object”? Dr. Broad speaks of it as involving a “certain claim” (p. 142). If it were not for the fact that there are delusive perceptual situations we might suppose that what we perceive is always a constituent of the physical world and we should not then have found it necessary to make a distinction between the epistemological object and the ontological object. So far as I can ascertain, Dr. Broad asserts that in veridical perceptual situations the epistemological object corresponds to an ontological object “of the physical kind.” It cannot be simply identified with the physical object since we do not see the physical object; we see a *sensum* which is both *judged* to be, and in fact *is*, in a certain relation to the physical object of which it is a *sensum*. Suppose, then, that “I am seeing a chair” is true, then, on Dr. Broad’s theory, if I have understood it rightly, this statement must be analysed as follows: “I am seeing a visual *sensum* (having such and such characteristics), and I am claiming that this *sensum* is a constituent of the physical object named ‘the chair’”. An epistemological object, therefore, seems to involve

both a sensum of a physical object *and* "That so and so is the case." This seems a very odd view, and it becomes almost unintelligible when one remembers that an epistemological object is that to which an ontological object corresponds whenever perception is veridical. Yet it seems clear that Dr. Broad does hold this view. Thus, in denying that the "pink-rat situation has no object," Dr. Broad explains that what is really meant is "that there is no *ontological* object, corresponding to the *epistemological* object which the situation certainly has, i.e., that the situation involves a certain claim which the physical world refuses to meet.* He says further that in order to know what is the epistemological object of any given situation it is only necessary to know what the substantive word in such a phrase as "I am seeing a chair" *means*, whereas in the case of an ontological object it is necessary to consider more than the *meaning of words*. Can we then say that the epistemological object is the metaphysical equivalent of the accusative case and that it becomes an object in a perceptual situation when to the accusative case is added (the metaphysical equivalent of) a noun clause stating that "this accusative stands for something which is a constituent of the physical world"? This statement expresses "the claim," and when it is true there is said to be an ontological object corresponding to the epistemological object; when it is false, there is an epistemological object but no ontological object.

This distinction between the epistemological object and the ontological object is forced upon Dr. Broad by the difficulty of dealing with the "pink-rat situation." What is perceived here is not a pink rat (because there are no pink rats), nor merely a *pink-rat-shaped sensum*, but something that is *more* than a sensum.

* Page 142. There are, however, various passages that are inconsistent with this account of the epistemological object, e.g., p. 638: "this epistemological object will be a pink rat." Cf. also pp. 152, 154.

This "more" seems to be expressed in the claim; "and this pink-rat-shaped sensum is *of* a physical object."

Dr. Broad distinguishes various "epistemological object situations." Of these the most important for our purpose are those which involve objects "of the physical kind"; these are further subdivided into (a) Thought situations; (b) Perceptual situations; (c) Memory situations. Dr. Broad recognises that the reference of the epistemological object to the physical object is different in kind in the case of (a) from its reference in the case of (b) (see p. 145). Perhaps not enough is made of this difference, but I think it is clear that Dr. Broad does intend to lay stress upon the fact that the perceptual situations involve a *claim* to reveal physical objects, and this, he says, is "what we *mean* when we say that they all have epistemological objects of the physical kind."* It will be necessary to ask what is involved in being an object "of the physical kind," but for the moment it will suffice to say that pink rats and chairs are both "objects of the physical kind."

Dr. Broad's introduction of the epistemological object has given an illusory clearness to his view. It seems to enable him to deal with pink-rat situations in a convincing way, for he can say—"There is an object of a *physical kind* but it is one to which no *ontological object* corresponds." The pink-rat-shape is regarded as a sensum which is the objective constituent of a delusive perceptual situation and the delusiveness of the situation is found to *consist* in the falsity of a proposition that states a *claim*. This being so, a veridical perceptual situation can be analysed as one that involves a claim that is met by the physical world, so that the difference between the two situations is reduced, as we have seen, to the difference between a *false* claim and a *true* claim. A further consequence is entailed by this analysis, viz.,

* Page 146. Italics mine.

that in perceiving a physical object we must be said to be "perceiving" a *sensum* which cannot be a literal constituent of the physical object. It is true, of course, that from the fact that *some* *sensa* are not constituents of the physical object, it does not follow that *none* are. Dr. Broad, however, has not only so defined "*sensum*" that it follows from the definition that no *sensa* could be constituents of physical objects,* but the same conclusion also follows from his making the difference between veridical and delusive perceptual situations wholly a difference between a true and a false proposition. Thus the introduction of the epistemological object tends to prejudge the question in favour of Dr. Broad's *Sensum* Theory. Moreover, it follows from the nature of the *sensum* that those qualities which belong to the *sensum* could not in the same way characterise the physical object; this leads too easily to the conclusion that none of the so-called "secondary qualities" can "literally characterise the physical object."

What, then, are the reasons that have led Dr. Broad to make such a fundamental distinction between the characteristics of the *sensum* and the characteristics of the physical object? Briefly—the difficulties due to the facts of subjective variations in the apprehension of the *same* object. An elliptical *sensum* cannot be identified with a round object, and so on.† That is, given two true propositions: "This is elliptical" and "This is round" then "This" cannot be the name of the *same* subject unless "elliptical" and "round" are relational predicates. But to admit that they are entails (1) the denial that "This" has simple location; (2) that visual shape is fundamentally different from geometrical figure. A theory worked out along these lines

* Dr. Broad makes one statement that is fundamentally inconsistent with his account of the *sensum*. I have referred below to the significance of this, See p. 200 *infra*.

† cf. Dr. Moore, *Contemporary British Philosophy*, vol. ii, p. 220.

seems to me to offer greater hopes of accounting for all the facts. It is not my business, however, to attempt to work out such a theory here, but to point out that Dr. Broad does not succeed in meeting the difficulties to obviate which he drew the distinction referred to.

In Dr. Broad's exposition of his theory there seems to be throughout the assumption that there is visual space, tactual space, physical space ; that these "spaces" have to be related to each other and that these relations are extremely complicated ; further, so it seems to me, the characteristics of all these "spaces" (including physical space) are regarded as fundamentally different from the characteristics of mathematical, or geometrical space.* It is true that in the more detailed exposition of his theory given in *Scientific Thought*, Dr. Broad treats the spatial characteristics of sensa in abstraction from their temporal characteristics only in order to simplify the statement of his problem ; but this initial simplication leads, as we shall see, to some untenable assumptions such as the assumption that there are various kinds of space. There is a further difficulty to the understanding of his theory due to his constant use of the phrase "a Pickwickian sense." Dr. Broad seems to me to put upon this phrase a construction that is not suggested by the term as used by members of the Pickwick Club, and which was not perhaps intended by Dr. Moore when he first introduced the term into philosophy. Thus Dr. Broad seems to mean by a "Pickwickian sense" of a word a sense that is *analogous* to its literal meaning but which requires some reinterpretation of the original implications. I should suppose, on the contrary, that a "Pickwickian sense" means a phrase used to indicate something the *reference* to which is understood by the hearer and the practical consequences of which are accepted but of which the analysis would be *fundamentally* different from

* *S.T.*, pp. 332, 339, 345, 359-60.

what might have been commonly supposed. This point of phraseology may not seem very important, but I cannot help thinking that Dr. Broad's argument gains an illusory clearness from his use of the phrase.* Thus, for instance, in dealing with the concept of *place* Dr. Broad says: "a perceptual object is composed of scientific objects, in the sense that the latter *literally* occupy that region of the movement-continuum which the constituents of the former occupy in *Pickwickian* senses."† This statement is certainly intended to suggest the *analogy* of perceptual spaces with *physical* space. But this analogy is, it seems to me, the result of a confusion which seriously affects Dr. Broad's theory. To this I shall return when I have dealt with one aspect of Dr. Broad's treatment of a "rival theory."

I think it is clear that the treatment of sensible appearance discussed by Dr. Broad under the title of "The Theory of Multiple Inherence" is intended to be Professor Whitehead's theory of objects.‡ It seems to me, however, that Dr. Broad has somewhat mis-stated the theory he is criticising, and the effectiveness of his criticism suffers in consequence.§ Certainly Dr. Broad criticises the theory as though it aimed at doing what *he* wants to

* *S.T.*, p. 233, and cf. 333-5.

† *S.T.*, p. 333, italics his.

‡ Page 162. Dr. Broad couples the names of Dr. Whitehead and Professor Kemp Smith as exponents of this "type of theory," but the differences between these two writers is so great that it does not seem to be a profitable classification. Professor Kemp Smith is not referred to again, and since Dr. Broad's account of the "theory" is not sufficient to indicate its "type," one must assume the exposition to be filled out with what Dr. Whitehead has himself written. I shall, therefore, speak of it as "Dr. Whitehead's theory."

§ Thus, *e.g.*, Dr. Broad says that on this theory it could be admitted that "the objective constituent of the perceptual situation was quite literally a spatio-temporal part of the perceived object" (p. 182). As thus stated, this seems to contradict what Whitehead says. See, *e.g.*, *The Principles*, pp. 64-66.

do, and only attempted to do it differently. Of course there is some element of truth in this assumption ; all theories presumably want to cover all the relevant facts, to depart from common sense only where such departure is unavoidable, and to avoid making assumptions that are either unnecessary or baseless. Since various theories of sense perception all profess to be dealing with the same range of facts, it is perhaps surprising that there should be so many different theories. But "the facts" are difficult to ascertain and state clearly ; the conditions are so complicated and their analysis is consequently so difficult that it is natural that one theory should be conceived in terms of one set of facts, and another theory in terms of another. But it is unreasonable to criticise a theory which accounts for certain facts on the ground of an objection that would be an objection only if the critic's theory—constructed upon the basis of a fundamentally different assumption—were both true and adequate. Yet it seems to me that this is exactly what Dr. Broad is doing when he accuses the "Theory of Multiple Inherence" of involving Absolute Space-Time. Dr. Broad states his objection on page 186. I shall assume that his account is familiar and will quote only one very important statement made in the course of his argument : "if objective constituents of visual situations are really situated where they appear to be, as the theory assumes, they are often situated in places not *occupied by matter in any ordinary sense of the word*. This is often true, *e.g.*, of mirror-images. Now, a mirror-image is *as good a particular* as the objective constituent of a more normal visual situation."* Having thus stated his difficulty Dr. Broad asks : "Whence does it get its particularity ?" and replies that on the given theory "it is a particular because it is a certain region of space," thus concluding that there is presupposed Space-Time as a kind of omnipresent and eternal

* *Italics mine.*

substance, every region of which is ready to be pervaded by some sensible quality from some other region." Even as thus stated the argument does not seem to me to be a good one ; but all that need be done here is to comment upon the phrases I have italicised. This way of stating the problem assumes the truth of Dr. Broad's own theory and denies what, if I understand him rightly, is an essential contention of Dr. Whitehead's theory. It is certainly very difficult to find out what is meant by "matter in any ordinary sense of the word" and no less difficult to know what Dr. Broad understands by "matter"; but it is at least clear that he must be regarding matter as essentially spatial, as occupying space, and as having qualities "projected upon it." This involves a conception that is in fundamental opposition to Dr. Whitehead's view.* The same misconception reappears in Dr. Broad's summing up of his view that both the theories he has been criticising involve Absolute Space-Time "because they require some kind of substance for sensible qualities to inhere in or to seem to inhere in. And, since in the case of mirror-images, etc., this substance can hardly be *the surfaces of physical objects*, there is nothing left for it to be except various regions of Absolute Space-Time." Again, the words I have italicized show a curious blindness in this connection to Dr. Whitehead's insistence that "bits of matter" are not the relata for spatial relations but that "the true relata are events." The criticism ignores Dr. Whitehead's warning that the "assimilation of time and space cannot proceed along the traditional line of taking matter as a fundamental element in space-formation." Most surprisingly Dr. Broad seems to have failed here to realise the relevance to this problem of the substitution of space-time for space and time. Among other consequences this substitution entails that substances need not be "persistent" or "relatively

* See especially *The Concept of Nature*, pp. 17-24. cf. *Science and the Modern World*, p. 24.

permanent"; and it throws doubt upon the "literal extension" of "matter" in space. It is, again, not easy to find out what Dr. Broad means by "*literal extension in space*"; it is a phrase he constantly uses but does not explain. I think he must mean at least "having definite position in a definite region of space"; in one place* he speaks of the "fundamental factor" involved in "materiality" as being "extension," and he adds, "This, if I am right, carries with it *some* extensible quality, but not any particular extensible quality." It is difficult to know whether Dr. Broad means to assign the same characteristics to a "physical object" and a "bit of matter," but it is probable that he does. What these characteristics are must be gathered from various disconnected passages throughout the book, for Dr. Broad treats of them only in discussing what he calls "the common-sense notion of a physical object."† On page 146 he asserts that everyone will agree that there are five characteristics which a physical object must possess; on pages 195-6 he reduces the "common-sense notion" of a physical object to "four logically independent parts," of which he accepts the first three. These are: relative permanence, publicity and neutrality, literal extension in space. Dr. Broad frequently uses the phrase, "persistent and neutral conditions" of the *sensa*, and I suppose that these persistent and neutral conditions constitute the physical object. He raises the question whether the "persistent and neutral conditions" of visual and tactual *sensa* have spatial characteristics such as the *sensa* sensibly appear to have. He maintains *both* that visual and tactual *sensa* are extended but are not constituents of the physical object *and* that "the persistent and neutral conditions of *sensa* *must* be interpreted by analogy with visual *sensa* and their relations in the visual sense-field" (p. 204).

* Page 663. Italics his.

† See pp. 146, 195, 204.

It is clear, then, that Dr. Broad agrees with common sense in regarding matter as "literally extended in space,"* and this, I think, entails that it has what Dr. Whitehead calls "simple location." There is a curious passage (pp. 192-3) where Dr. Broad suggests that it is *logically* possible that there should be "one specially favourable position" in which the geometrical shape and intrinsic colour of the penny are revealed, and he adds that the Sensum-Theory might equally make this "preposterous claim" that "from one specially favourable position, the objective constituent is literally a part of the physical object, and that the qualities which we detect in it are literally those of the physical object." Now the point to notice is that the preposterousness of the claim is supposed to consist in the assumption that *one* special position can be so "favourable," whereas the "real shape" and "real colour" do not, so Dr. Broad seems to argue, manifest themselves so clearly. But what strikes me as amazing is that this *should* be assigned as the reason for the "preposterousness" of the claim. Dr. Broad's treatment here suggests, first, that he regards it as a kind of unfortunate accident that *sensa* only are perceived; and secondly, he assumes that "literal extension" (by which I think he *must* mean "the extension of physical space") is such that it could be revealed to sense in precisely the same way as *shape* is revealed to sense. Both these views lead to disastrous consequences. The first results in making *sensa* a "veil" that hides the physical object from us, as Dr. Hicks has pointed out. The second leads to the confusion of various sensuous spaces with physical space.

To deal with the first point. Dr. Broad's fundamental distinction is between *sensa* and *physical objects*, and it is clear that on his view the latter are never sensed, so that, as Dr. Hicks has pointed out, it is incorrect to say that the *sensa* are

* *S.T.*, p. 232.

“appearances of” the physical object. I will concentrate on one important difference and one important resemblance between the two as conceived by Dr. Broad. *Sensa* are transient particulars; physical objects are their persistent and neutral conditions; both have “literal extension” and a “certain geometrical size and shape” and stand in “straightforward spatial relations” to entities of the same type. But the “spaces” in which *sensa* and physical objects respectively are must clearly be different in kind. Here again Dr. Broad seems to have forgotten what is involved in the substitution of Space-Time for space and time. This leads to the consideration of the second point. If there are different kinds of space there will be different kinds of time, so that, as Dr. Whitehead has pointed out, the daily arrival of the visual and tactual newspaper at the same visual and tactual times will require an incredible miracle.* This incredible result is the inevitable consequence of regarding space as a relation between *objects* instead of between *events*. It is this mistake that has “created the fatal divorce between space and time.”† Its rejection surely forces us to take seriously the distinction between *shape* and *geometrical figure*. The “space” of geometry, of which surely physical space is a special instance, has not the characteristic of “shape-iness”—to use Dr. Whitehead’s expression.‡ *Shape* as a quality of sense-objects is only derivatively in space by reason of its ingreience in events; geometrical figures, such as circles, squares, having the characteristics specified in geometrical definitions, have no “shape,” if by “shape” be meant a perceivable, *i.e.*, *recognisable* entity, such as Whitehead calls an object. But this is what “shape” must mean as applied to *sensa*; and it cannot therefore be possible to ascribe “shape” to their imperceivable persistent conditions, since these conditions

* *The Principles of Natural Knowledge*, p. 194

† *Ibid.*, p. 192.

‡ *Science of the Modern World*, p. 37.

are said to be "literally in physical space." It is all the more surprising that Dr. Broad should ignore this important difference, since, in dealing with Dr. Whitehead's theory, he was led to make a distinction between "sensible form" and "geometrical property," which is, I think, the distinction that I have elsewhere described as the distinction between "shape as an object" and "geometrical shape."* Dr. Broad's neglect of the distinction when he is expounding his own theory is doubtless due to his belief that Physical Space is to be understood on the analogy of visual space. Thus understood, space becomes a relation between *objects* or material. But this "space" is not the space of space-time and has nothing to do with the "matter" of physics. The "shape-iness" of space and the "push-iness"† of bodies, being objects, can no more characterize "matter," as the physicist conceives it, than they could characterize "a colony of unintelligent monads."‡

These confusions lead finally to the belief that physical objects have "simple location." Since Dr. Whitehead's theory rests upon the denial of this belief, no criticism which assumes it can be adequate. It seems to me, however, that Dr. Broad's criticism would be valid only if simple location were assumed. Dr. Whitehead pointed out some time ago that the location of an object in a volume of space is a derivative notion, to be defined in terms of the ultimate relation of situation, which is not a *spatial* relation but a relation between

* See *Journal of Philosophy*, vol. xxiii, p. 204. I now think it was a mistake to use the word "shape" in connection with "geometrical shape"; but I was anxious to avoid confusion with what Whitehead has called "geometrical figure" which is also an object. Dr. Broad's terminology is clearer, but I was not acquainted with it when I wrote the article referred to, or I might have adopted it.

† *The Principle of Relativity*.

‡ Broad, p. 201. It should be noted that, given the above distinction, there is no such thing as "geometrical size."

objects and events. And he pointed out that "location in space is always an ideal of thought and never a fact of perception" (*The Principles of Natural Knowledge*, p. 166. Compare also *The Concept of Nature*, p. 160.) This notion has been more fully developed in Dr. Whitehead's last book, to which I have time to make only a very brief reference here. To take a "bit of matter" as fundamental is to assume simple location, which is defined by Dr. Whitehead as follows; "To say that a bit of matter has *simple location* means that, in expressing its spatio-temporal relations, it is adequate to state that it is where it is, in a definite region of space, and throughout a definite duration of time, apart from any essential reference of the relations of that bit of matter to other regions of space and to other durations of time."* Dr. Whitehead maintains that "among the primary elements of nature as apprehended in our immediate experience, there is no element whatever which possesses this character of simple location." Hence, when I at A see a green leaf in a mirror I do not see the leaf at A, nor *simply* behind the mirror, but as located in the mirror from A. There must, of course, be some way of uniquely determining the standpoint A. But to determine this does not require Absolute Space-Time; the standpoint A is uniquely determined by the bodily event; this in turn is determined by the relations of all other events. Dr. Broad's objection was that Dr. Whitehead's theory requires a region of absolute space-time "*ready to be pervaded* by some sensible quality from some other region,"† and this, he says, makes Space-Time a "kind of omnipresent and eternal substance." But I can see no reason why this conclusion should be drawn; there is no substance "*waiting to be pervaded*"; there is an "interfusion of events" within which there will be a "reciprocity of aspects." This conception certainly raises profound difficulties; and it doubtless

* *Science and the Modern World*, p. 81.

† Page 187. Italics mine.

involves a uniform structure, but this, as Dr. Broad will admit, is not equivalent to assuming Absolute Space-Time as a kind of substance.

Finally, it should be remembered that Dr. Whitehead's theory does not share Dr. Broad's initial assumptions. It is true that both have the appearance of paying respect to the deliverances of common sense ; both are anxious to maintain that "red" is in nature, and so on. But, whereas Dr. Broad concludes that a sensum may be red, but a physical, or common-sense thing, cannot be coloured, Dr. Whitehead maintains that the red object perceived is just *what* it is perceived as being, but that there is no reason for supposing that the universe contains such an entity as the common-sense "table"—viz., a continuous, persistent substratum of qualities, capable of momentary existence, but not capable of being at a point. This conception is dependent *for its meaning* upon the separation of space and time. This separation seems sometimes to be assumed by Dr. Broad since he accepts three out of the four characteristics which he recognises to belong to the common-sense notion of a physical object or a material thing.

As I have not seen Professor Moore's paper and have received Mr. Price's contribution too late to allow time for much comment, I will content myself with making two remarks.

I do not think that the footnote to page 172 can be accepted. Mr. Price gives no reason whatever for his dogmatic assertion that "it is very hard to believe that A can have the quality q from a place p , and the quality q^1 from a place p^1 ," unless there are minds at p and p^1 actually sensing A. To this it seems possible only to reply—"Why?" Surely the *onus probandi* lies on those who assert that the act of sensing does thus confer qualities. Even were Mr. Price right here, it seems odd that he should find no other difference between his theory and that of "Multiple

Inherence." A quite irreducible difference remains, viz., that according to his "Appearing Theory" there is a fundamental difference between the colour that the penny *really has* and the colour it may "look to have." According to the other theory, the difference is *not* fundamental; the "real" colour and "the colour it looks to have" are both apparent characters which are really what they appear to be. To develop the implications of this difference between the two theories would take too long, but it certainly seems clear that it is an irreducible difference.

The difference between the theories comes out again when Mr. Price suggests that I can never be absolutely certain that a penny is *really* a penny *because* I cannot compare an infinite number of perceptual situations. But this comparison could not yield a certainty not capable of being given in the first situation. The only way in which we can *know* that "so and so is a penny" is that it is *revealed* to be so in *sensing*; the sensible appearance is *an* appearance of the penny. Mr. Price would probably admit the truth of the latter statement. It is consistent with the admission of hallucinations; but hallucinations are not to be discovered by "infinite comparisons." Nor, I think, would Mr. Price's three criteria be adequate. But it is difficult to be sure of this, since Mr. Price has left in such obscurity his fundamental notion of "belonging to so and so."

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